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Lys	Asp	Lys	Glu	His	Leu	Leu	Thr	Ser	Thr	Arg	Glu	Ile	Leu	Pro	Ser
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Gln	Ser	Gly	Pro	Ala	Gln	Asp	Ser	Leu	Leu	Glv	Ser	Ser	Gly	Ser	Ser
		•	340					345		1			350		
Glv	Pro	Glu		Lvs	Val	Δla	Ser			T.vs	Ser	Ara	Pro	Pro	λen
017		355		2,5	vul	ALG	360	110	ALU	Lys	Jer	365	-10	FIO	Veii
Sar	Val		Dro	7 ~~	Dra	c		77-	7.00	c	71.		Ser	c	Mile en
Ser		Leu	PIQ	Arg	PIO		ser	Ald	ASII	ser		ser	ser	ser	inr
~	370			_		375		_		_	380	_	_	_	
	ser	Asn	His	Ser	_	His	Thr	Pro	Glu		Pro	Leu	Pro	Pro	
385					390					395					400
Gly	Gly	Asp	Leu	Ala	Ser	Arg	Leu	Ser		Asp	Glu	Gly	Glu	Met	Asp
				405					410					415	
Gly	Ala	Asp	Glu	Ser	Glu	Lys	Leu	Asp	Cys	Gln	Phe	Ser	Thr	His	His
			420					425					430		
Pro	Arg	Pro	Leu	Ala	Phe	Cys	Ser	Phe	Gly	Ser	Arg	Leu	Met	Gly	Arg
		435					440					445		-	_
Gly	Tyr	Tyr	Val	Phe	Asp	Arq	Arq	Trp	Asp	Arq	Phe	Arq	Phe	Ala	Leu
•	450	-			•	455	•	•	•		460				
Asn	Ser	Met	Val	Glu	Lvs		Leu	Asn	Ser	Gln		Trn	Lys	Lvs	Tle
465					470					475			-,-	_,_	480
	Pro	Δla	Δla	Asn		Pro	Met	Dro	Sar		λlo	αla	His	Tla	
	110		112.0	485	DCI	110	1100	110	490	110	nia	ALA	1115	495	1111
Thr	Dro	Wal.	Dro		C 0 x	7/07	T 0	C1.		Dho	004	3	D		N1 -
1111	PIQ	val		Ald	ser	vai	Leu		PIO	Pne	ser	ASII	Pro	Ser	Ala
1		_	500	_		_		505	_	_	_		510	_	_
vaı	ryr		Pro	ser	Ala	Pro		Ser	Ser	Arg	Leu		Ser	Ser	Tyr
		515					520					525			
Ile		Thr	Ser	Ala	Met		Ser	Asp	Ala	Ala	Phe	Val	Thr	Ser	Pro
	530					535					540				
Asp	Pro	Ser	Ala	Leu	Met	Ser	His	Thr	Thr	Ala	Phe	Pro	His	۷al	Ala
545					550					555					560
Ala	Thr	Leu	Ser	Ile	Met	Asp	Ser	Thr	Phe	Lys	Ala	Pro	Ser	Ala	Val
				56 5		-			570	•				575	
Ser	Pro	Ile	Pro	Ala	Val	Ile	Pro	Ser		Ser	His	Lvs	Pro		Lvs
	_		580					585				-1-	590		-1~
Thr	Lvs	Thr		Lve	Ser	Ser	Lve		Lve	Acn	ī.em	Ser	Thr	۵ra	So~
	2,3	595	J-1	-73	JCI	JC1	600		ay 3	чэр	DCU	605	* ***	1119	261
A ===	Gl.		Dro	C ~ ~	N ==	T		n	T	Dwa	c1-		C	Th	C
Yob		Jer	210	⊃e1			пÀя	mrg	гАз	PEO		ser	Ser	1 11 I.	ser
C	610		٥.			615		_		~-	620		_	_	_
ser	ser	ser	ser	ser	ser	ser	Ser	ser	Leu	GIn	Thr	Ser	Leu	Ser	Ser

Pro Leu Ser Gly Pro His Lys Lys Asn Cys Val Leu Asn Ala Ser Ser

635

630

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645
                                  650
Ala Leu Asn Ser Tyr Gln Ala Ala Pro Pro Tyr Asn Ser Leu Ser Val
                               665
                                                    670
           660
His Asn Ser Asn Asn Gly Val Ser Pro Leu Ser Ala Lys Leu Glu Pro
                                                685
       675
                           680
Ser Gly Arg Thr Ser Leu Pro Gly Gly Pro Ala Asp Ile Val Arg Gln
                                            700
                       695
Val Gly Ala Val Gly Gly Ser Ser Asp Ser Cys Pro Leu Ser Val Pro
                                        715
705
                   710
Ser Leu Ala Leu His Ala Gly Asp Leu Ser Leu Ala Ser His Asn Ala
                                    730
               725
Val Ser Ser Leu Pro Leu Ser Phe Asp Lys Ser Glu Gly Lys Lys Arg
                                745
                                                    750
Lys Asn Ser Ser Ser Ser Lys Ala Cys Lys Ile Thr Lys Met Pro
                            760
Gly Met Asn Ser Val His Lys Lys Asn Pro Pro Ser Leu Leu Ala Pro
                                            780
                       775
Val Pro Asp Pro Val Asn Ser Thr Ser Ser Arg Gln Val Gly Lys Asn
                   790
Ser Ser Leu Ala Leu Ser Gln Ser Ser Pro Ser Ser Ile Ser Ser Pro
                                   810
               805
Gly His Ser Arg Gln Asn Thr Asn Arg Thr Gly Arg Ile Arg Thr Leu
                                825
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aggaaccgca aggccccaaa gagagtgtca cagccctggc ttagggagct cctaggtctg
ggctgcccga agagcaaggg ctcttccttc cttctttctt ttctccttct tgctacctgc
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600
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 ccccagcct tcagggcctc cctggcctga aggtgggcct caccagggac tcacccctt
 ctgcccagaa acctgtctgc ctcctgctgc cattcatggc gcccaggcta taggtat
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                                     10
 Leu Leu Phe Gly Gln Pro Arg Pro Arg Ser Ser Leu Ser Gln Gly Cys
                                 25
 Asp Thr Leu Phe Gly Ala Leu Arg Phe Leu Ala Ser Pro Ser Phe Trp
 Val Ser Pro Arg Ser Pro Val Pro Ala Val Gly Ala Ala Cys Cys Met
                         55
 Pro Gly Pro Ala Thr Ala Ser Gln Arg Ala Gly Ala Leu Thr Ser Thr
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                     70
 Trp Ser Cys Leu Pro His Cys Ser Ser Arg Arg Val
                                     90
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 <211> 390
 <212> DNA
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120
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catgggtcct gtctcctggg ggccaccttt gtgtcccgtg gtggctgacc ctgagaggga
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tgtccctggg gcctctcagg agggacgcgt
390
<210> 3202
<211> 116
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Lys Gly His Ala Ala Ala Gly Val Ser Thr Ala Lys Pro Thr Ala Phe
                                25
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Gly Thr Glu Val Ser Ser Cys Thr Gly Ala Arg Ile Pro Asn Thr Ala
        35
Val Ala Glu Gly Pro Gly Gly Val Gln Val Pro Asn Pro Ser Glu Pro
    50
                        55
                                            60
Asp Pro Asp Met Gly Pro Val Ser Trp Gly Pro Pro Leu Cys Pro Val
65
Val Ala Asp Pro Glu Arg Glu Gly Cys Gly Asp Ala His Met Thr Leu
                85
                                    90
Gly Ser Gln Arg Gln Pro Leu Leu Thr Leu Arg Val Pro Gly Ala Ser
                                105
                                                    110
            100
Gln Glu Gly Arg
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gagaagggcc cccagtatgg cacactggag aaggcetggc atgcettttt cacggcggct
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600
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gaggttgagg cttccaagaa aagctaccac gcagcccgga aggatgagaa gaccgcccag
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caggaacggg tggaacgctg tgccaaggag gccgagaaga caaaagctca gtatgagcag
acgetggcag agetgcateg etacaeteca egetacatgg aggaeatgga acaggeettt
gagacetgee aggeegeega gegeeagegg ettetttet teaaggatat getgeteace
960
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gtgcctacaa gagatggcac cgcaccccca ccccagtccc cggggtcccc aggcacgggg
1260
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1560
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Trp Glu Ala Gly Asn Tyr Arg Arg Thr Val Gln Arg Val Glu Asp Gly
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His Arg Leu Cys Gly Asp Leu Val Ser Cys Phe Gln Glu Arg Ala Arg
Ile Glu Lys Ala Tyr Ala Gln Gln Leu Ala Asp Trp Ala Arg Lys Trp
                       55
Arg Gly Thr Val Glu Lys Gly Pro Gln Tyr Gly Thr Leu Glu Lys Ala
                   70
                                       75
Trp His Ala Phe Phe Thr Ala Ala Glu Arg Leu Ser Ala Leu His Leu
               85
                                   90
Glu Val Arg Glu Lys Leu Gln Gly Gln Asp Ser Glu Arg Val Arg Ala
           100
                               105
                                                   110
Trp Gln Arg Gly Ala Phe His Arg Pro Val Leu Gly Gly Phe Arg Glu
```

140

120

135

Ser Arg Ala Ala Glu Asp Gly Phe Arg Lys Ala Gln Lys Pro Trp Leu

Lys Arg Leu Lys Glu Val Glu Ala Ser Lys Lys Ser Tyr His Ala Ala

115

```
155
       150
Arg Lys Asp Glu Lys Thr Ala Gln Thr Arg Glu Ser His Ala Lys Ala
          165
                            170
Asp Ser Ala Val Ser Gln Glu Gln Leu Arg Lys Leu Gln Glu Arg Val
         180
                          185
                                   190
Glu Arg Cys Ala Lys Glu Ala Glu Lys Thr Lys Ala Gln Tyr Glu Gln
                        200
      195
Thr Leu Ala Glu Leu His Arg Tyr Thr Pro Arg Tyr Met Glu Asp Met
                    215
                                      220
Glu Gln Ala Phe Glu Thr Cys Gln Ala Ala Glu Arg Gln Arg Leu Leu
          230
                                  235
Phe Phe Lys Asp Met Leu Leu Thr Leu His Gln His Leu Asp Leu Ser
                             250
                                                 255
Ser Ser Glu Lys Phe His Glu Leu His Arg Asp Leu His Gln Gly Ile
        260 265
Glu Ala Ala Ser Asp Glu Glu Asp Leu Arg Trp Trp Arg Ser Thr His
              280 285
Gly Pro Gly Met Ala Met Asn Trp Pro Gln Phe Glu Glu Trp Ser Leu
          295
Asp Thr Gln Arg Thr Ile Ser Arg Lys Glu Lys Gly Gly Arg Ser Pro
                 310
                                  315
Asp Glu Val Thr Leu Thr Ser Ile Val Pro Thr Arg Asp Gly Thr Ala
             325
                              330
Pro Pro Pro Gln Ser Pro Gly Ser Pro Gly Thr Gly Gln Asp Glu Glu
                 345
                                            350
         340
Trp Ser Asp Glu Glu Ser Pro Arg Lys Ala Ala Thr Gly Val Arg Val
                                         365
      355
                        360
Arg Ala Leu Tyr Asp Tyr Ala Gly Gln Glu Ala Asp Glu Leu Ser Phe
                                     380
                   375
  370
Arg Ala Gly Glu Glu Leu Leu Lys Met Ser Glu Glu Asp Glu Gln Gly
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                                395
Trp Cys Gln Gly Gln Leu Gln Ser Gly Arg Ile Gly Leu Tyr Pro Ala
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Asn Tyr Val Glu Cys Val Gly Ala
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ctgttgcacc ccacaggaga gccccggagc tatgtggagt ctgtggcacg gacagcggtg
180
gctggacccc gagctcagga ctctgagccc aagagcttta gtgctccagc cacccaggcc
240
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cccctctcca ccagcagecc catectcagt getgacagea etteagtggg gagtttcccg
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420
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tetectetee egactgtggg cagtagetae ageageeeeg actaeteaet teageattte
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tteggetgge gggeeateaa teeeageatg getgeeecea geagteeeag tttgageeat
caccagatga tgggtccacc aggcactggc ttccatggta gcactgtctc cagcccccag
agcagtgcag cgaccaccc ggggagcccc agcctgtgtc ggcacccagc aggggtctac
caggittetg gcctccacaa caaagtggcc accacccgg ggagtcccag cctgggccgg
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cetggaagec ceageetggg cegteacete ggagggtetg gatetgtggt teeeggeage
ccctgcttgg accggcatgt ggcctatggc ggctattcta ccccggagga tcggagaccc
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1140
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1380
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tttgtccagg acacttctaa gtattggtac aagcctaaga tc
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<212> PRT
<213> Homo sapiens
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1
                                    10
                                                        15
Arg Ser Pro Pro Gly Leu Ala Lys Thr Pro Leu Ser Ala Leu Gly Leu
                                25
Lys Pro His Asn Pro Ala Asp Ile Leu Leu His Pro Thr Gly Glu Pro
```

19																
S		_	35			_		40	_				45		D	3
Fig.		50					55					60				
Tyr Gly His Glu Ile Pro Leu Arg Asn Gly Thr Leu Gly Gly Ser Phe 85		Gln	Asp	Ser	Glu		Lys	Ser	Phe	Ser		Pro	Ala	Thr	Gln	
Val		Gly	His	Glu			Leu	Arg	Asn		Thr	Leu	Gly	Gly		Phe
Ser	Val	Ser	Pro			Leu	Ser	Thr			Pro	Ile	Leu			Asp
Pro	Ser	Thr			Gly	Ser	Phe			Gly	Glu	ser			Gln	Gly
Ser Leu Gly Gln Pro Ser Pro Ser Ala Gln Arg Asn Tyr Gln Ser Ser 145 Ser 150 Ser Ser 150 Ser Ser 150 Ser Ser 150 Ser Ser 160 Ser Ser 170 Ser 175 Ser 160 Ser Ser 160 Ser Ser 170 Ser 175 Ser 175 Ser 180 Ser Ser Ser Ser Pro Glu Ser Gln Ala Arg Ala Gln Phe 180 Ser Ser 180 Ser Pro Gly Ser Pro Gly Ala Arg His Ser 190 Ser Ser	Pro	Arg		Pro	Thr	Gln	Pro		Leu	Glu	Ser	Gly		Arg	Ser	Gly
145 150			_								_		_	~1	_	•
Leu Gin His Phe Ser Ser Ser Pro Gilv Ser Gin Ala Arg Ala Gin Phe 180	145		_			150					155					160
Ser Val Ala Gly Val His Thr Val Pro Gly Ser Pro Gln Ala Arg His Arg Thr Val Gly Thr Asn Thr Pro Pro Pro Gly Phe Gly Trp Arg His 205	Ser	Pro	Leu	Pro		Val	Gly	Ser	Ser		Ser	Ser	Pro	Asp		Ser
Ser Val Ala Gly Val His Thr Val Pro Gly Ser Pro Gly Pha Ala Arg His Thr Pro Pro Ser Pro Gly Pha Aly Arg Arg Ala Ile Asn Pro Ser Pro Gly Pha Gly Thr Arg Ala Ile Asn Pro Ser Ala Ala Pro Ser Ser His Arg Arg <td>Leu</td> <td>Gln</td> <td>His</td> <td></td> <td>Ser</td> <td>Ser</td> <td>Ser</td> <td>Pro</td> <td></td> <td>Ser</td> <td>Gln</td> <td>Ala</td> <td>Arg</td> <td></td> <td>Gln</td> <td>Phe</td>	Leu	Gln	His		Ser	Ser	Ser	Pro		Ser	Gln	Ala	Arg		Gln	Phe
Arg Thr Val Gly Thr Ass Thr Pro Ser Pro Gly Phe Gly Thr Arg Arg 215 "<">"<">"<"<">"<"<">"<"<">"<"<">"<"<"<">"<"<">"<"<">"<"<"<"<">"<"<"<">"<"<">"<"<"<">"<"<"<">"<"<"<">"<"<">"<"<"<"<">"<"<"<">"<"<"<"<">"<"<"<">"<"<"<"<">"<"<"<"<">"<"<"<">"<"<"<"<">"<"<"<"<"<">"<"<"<"<"<">"<"<"<"<"<">"<"<"<"<"<"<">"<"<"<"<"<"<"<" Gly Pro Ger For His Gly Ser Leu Ser Ala Ala Ala Thr Gly Pro Gly Ser Thr Val 250 " Gly Ser Thr Val 250 " 240 Ala Ala Thr Gly Pro Ger Ger Ala Ala Ala Thr Gly Ser Ala	Ser	Val			Val	His	Thr			Gly	Ser	Pro			Arg	His
Ala Ile Asn Pro Ser Met Ala Ala Ala Pro Ser Pro Ser Leu Ser Ala Ala Ala Pro Ser Ser Pro Ser Leu Ser Ala Ala Ala Ala Ala Pro Ser Ser Pro Ser Leu Ser Ala Ala Ala Ala Pro Ser Ser Pro Ser Leu Ser Ala Ala Ala Pro Ser Ser Pro Ser Pro Val 245	Arg	Thr		Glv	Thr	Asn	Thr		Pro	Ser	Pro	Gly		Gly	Trp	Arg
225														_	_	_
His Gln Met Met Jets Gly Jets Pro Jets Gly Jets Thr Jets Gly Jets Pro Jets Gly Jets		Ile	Asn	Pro	Ser		Ala	Ala	Pro	Ser		Pro	Ser	Leu	Ser	
Ser Ser Gln Ser Ala Ala Thr Thr Pro Gly Ser Leu Cys Arg His Pro Ala Gly Val Tyr Gln Val Ser Gly Leu His Asn Lys		Gln	Met	Met			Pro	Gly	Thr		Phe	His	Gly	Ser		Val
Cys Arg His Pro Ala Gly Val Tyr Gln Val Ser Gly Leu His Asn Lys Val Ala Thr Thr Pro Gly Ser Pro Ser Leu Gly Arg His Pro Gly Ala Ser Jala	Ser	Ser	Pro			Ser	Ala	Ala			Pro	Gly	Ser			Leu
Val Ala Thr Thr Pro Gly Ser Pro Ser Leu Gly Arg His Pro Gly Ala Ser Ala Ala Ser Ala Ala <td>Cys</td> <td>Arg</td> <td></td> <td></td> <td>Ala</td> <td>Gly</td> <td>Val</td> <td></td> <td></td> <td>Val</td> <td>Ser</td> <td>Gly</td> <td></td> <td></td> <td>Asn</td> <td>Lys</td>	Cys	Arg			Ala	Gly	Val			Val	Ser	Gly			Asn	Lys
His Gln Gly Asn Leu Ala Ser Gly Leu His Ser Asn Ala Ile Ala Ser 300 Pro Gly Ser Pro Ser Leu Gly Asn His Leu Gly Gly Gly Ser Gly Ser Val 320 Nal Pro Gly Ser Pro Cys Leu Asn Arg His Leu Gly Gly Gly Gry Gry Gly Gry Gry Gry Gry Gry Gry Gry Gry Gry Gr	Va l	Δla		Thr	Pro	Glv	Ser		Ser	Leu	Glv	Ara		Pro	Glv	Ala
305		290					295					300				
Pro Gly Ser Pro Ser Leu Gly Arg His Leu Gly Ser Gly Ser Val Val Pro Gly Ser Pro Cys Leu Asp Arg His Val Ala Tyr Gly Gly Tyr Tyr Arg Arg Pro Thr Leu Ser Arg Gly Ser Arg Arg Arg Pro Thr Leu Ser Arg Gln Ser Ala Arg Arg Arg Pro Thr Pro Arg Arg Arg Arg Pro Arg		GIN	GIY	Asn	Leu		ser	GIĀ	Leu	nis		ASII	AIA	116	AIA	
Val Pro Gly Ser Pro Cys Leu Asp Arg His Val Ala Tyr Gly Gly Tyr Ser Thr Pro Glu Asp Arg Pro Thr Leu Ser Arg Gln Ser Arg Ala Ser Gly Tyr Gln Ala Pro Ser Thr Pro Ser Pro Ala 370 Tyr Pro Gly Leu Ser Ser Pro Ala Thr Ser Pro Ala 385 Tyr Pro Gly Leu Ser Ser Pro Ala Thr Ser Pro Pro Ala Ser Pro Ala Thr Ser Pro Ser Pro Ala Leu Pro Ser Pro Ala Ala Leu Pro Ala His Pro Ala Leu Pro Ala Ala Pro Ala Pro Ala Pro Ala Pro A		Glv	Ser	Pro	Ser		Gly	Arq	His	Leu		Gly	Ser	Gly	Ser	
Ser Thr Pro Glu Asp Arg Arg Pro Thr Leu Ser Arg Gln Ser Ala Ser Gly Tyr Gln Ala Pro Ser Thr Pro Ser Phe Pro Val Ser Pro Ala 370		_			325					330					335	
Ser Gly Tyr Gln Ala Pro Ser Thr Pro Ser Phe Pro Val Ser Pro Ala 370	Val	Pro	Gly		Pro	Cys	Leu	Asp		His	Val	Ala	Tyr		Gly	Tyr
Ser Gly Tyr Gln Ala Pro Ser Thr Pro Ser Pro Val Ser Pro Ala Tyr Tyr Pro Gly Leu Ser Ser Pro Ala Thr Ser Pro Ser Pro Asp Ser Pro Ala Thr Ser Pro Ser Pro Ala Leu Pro Glu Lys Arg Ala Ala Pro Arg Ala Bro Arg Arg Ala Bro Arg A	Ser	Thr		Glu	Asp	Arg	Arg		Thr	Leu	Ser	Arg		Ser	Ser	Ala
Tyr Tyr Pro Gly Leu Ser Ser Pro Ala Thr Ser Pro Ser Pro Asp Ser 385	Ser			Gln	Ala	Pro			Pro	Ser	Phe		Val	Ser	Pro	Ala
385	Tyr		Pro	Gly	Leu	Ser		Pro	Ala	Thr	Ser		Ser	Pro	Asp	Ser
Arg Met Ser Val Gly Asp Arg Ala Gly Ser Leu Pro Asn Tyr Ala Thr 420	385					390					395					400
11e Asn Gly Lys Val Ser Ser Pro Val Ala Ser Gly Met Ser Ser Pro Val Ala Ser Gly Met Ser Ser Pro Val Ser Gly Met Ser Pro Val Ala Ser Gly Met Ser Pro Val Ser Pro Val Ala Ser Gly Met Ser Pro Val Ser Pro Val Ala Ser Gly Met Ser Pro Val Ser Pro Val Ala Ser Gly Met Ser Pro Val Ala Ser Pro V	Ala	Ala	Phe	Arg		Gly	Ser	Pro	Thr		Ala	Leu	Pro	Glu		Arg
Ile Asn Gly Lys Val Ser Ser Pro Val Ala Ser Gly Met Ser Ser Pro 445 Ser Gly Gly Ser Thr Val Ser Phe Ser His Thr Leu Pro Asp Phe Ser Phe Ser His Thr Leu Pro Asp Phe Ser 460	Arg	Met	Ser			Asp	Arg	Ala		Ser	Leu	Pro	Asn		Ala	Thr
Ser Gly Gly Ser Thr Val Ser Phe Ser His Thr Leu Pro Asp Phe Ser 450 455 460	Ile	Asn			Val	Ser	Ser			Ala	Ser	Gly			Ser	Pro
100	Ser			Ser	Thr	Val			Ser	His	Thr			Asp	Phe	Ser
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Asp Met Thr Ser Arg Leu Gln Ala Ala Lys Glu Gln Thr Gln Asp Leu
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Gly Glu Arg Ala Leu Gly Ser Cys Gly Asn Gln Gly Pro Pro Ile Leu
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Val Pro Val Ile Gly Cys Ile Pro Ser Ser Cys Leu Cys Leu Ser Trp
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420
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Lys Ala His Arg Leu Val Leu Ala Ala Ser Ser Pro Tyr Phe Ala Ala
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Asp Ala Pro Asp Glu Ile Ala Thr Tyr Met Val Glu His Asp Phe Ile
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Asp Lys Ala Glu Asp Met Leu Ser Glu Asp Thr Asp Ala Asp Arg Gly
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Thr Gly Glu Glu Ser Arg Gln Ser Gln Ala Asn Ala Pro Val Tyr Gln
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Glu Arg Met Lys Leu Glu Glu Gln Arg Arg Leu Leu Glu Glu Glu Ile
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Ala Thr Pro Gln Ala Phe Asp Ser Ser Ser Ala Val Val Phe Ile Phe
       275
                            280
Val Ser Thr Ala Val Val Val Leu Val Ile Leu Thr Met Thr Val Leu
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                                            300
Gly Leu Val Lys Leu Cys Phe His Glu Ser Pro Ser Ser Gln Pro Arg
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305
                    310
Lys Glu Ser Met Gly Pro Pro Gly Cys Asp Glu
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gaagettega ggaggtacaa gaaagteatt ecaggagetg ageceeteat etgegeetee
180
ageotyetty ccacagooco etgectetac etggeteteg teetggeece gaccaccetg
240
etgqcctcct atgtgttcct gggccttggg gagctgcttc tgtcctgcaa ctgggcagtg
gttgccgaca tcctgctgtc tgtggtggtg cccagatgcc gggggacggc agaggcactt
360
cagateacgg tgggccacat cctgggagac gctggcagcc cctatctcac aggacttatc
totagtgtcc tgcggccagg cgccctgact cctctgcagc gcttccgcag cctgcagcag
agetteetgt getgegeett tgteategee etggggggeg getgetteet getgaetgeg
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aatgatgtgg acagcaacga cctggagaga caaggcctac tttcgggcgc tggcgcctct
acagaggage cetgaggtee etgectacae tegteetgee tgeaageete eegttggtee
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totqccactt ttgaattccc ggctggagag ctggcaggac cctgtggctg ggctgggaat
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aaagcccatg gattttgggc ctgta
985
```

<210> 3224

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				<u>.</u>	y
				- 1	
Control of the Contro					
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			•		
		·		•	20 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -
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					e de la companya de La companya de la co
					4 <u>.</u>

```
aacatgggat gagtttcatt ttcagggttc cgaggggcca tgagtggtac caagatccct
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Cys Phe Pro Val Pro Lys Met Pro Val Pro Cys Ala Leu Gly Glu Glu
Leu Val Pro Cys His Arg Gly Thr Gly Pro Ala Val Val Trp Pro Ala
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                        55
                                            60
Gln Pro Gln Gln Gly Glu Val Glu Pro Gln Pro Gln Pro Thr Gln Arg
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                                        75
Met Glu Pro Pro Ser Ala Ala Lys Asn Asn His Thr Ala Phe Glu Val
                                    90
                85
Ser His Pro Arg Cys Arg Trp Gly Cys Met Lys Leu His Glu His Gly
                                105
Met Ser Phe Ile Phe Arg Val Pro Arg Gly His Glu Trp Tyr Gln Asp
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Pro Trp Arg Cys Pro Trp Phe Pro Met
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gcattcccat cocctctccc ggggcggagg tgaggacctc cttggttcct ttggttctgt
240
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ggccaggtga ccctggtccc cgaggagcct gaggacatgt ggcacactta caacctcgtg
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540
```

```
gtcaagatgg gggcttacca caccatcgag ctggagccca accgccagtt caccctggcc
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1623
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                                                  30
Val Gln Val Gly Asp Ser Leu Arg Ala Ser Thr Ile Arg Lys Val Gln
                                              45
       35
                           40
Thr Glu Ser Ser Thr Gly Ser Val Gly Ser Asn Arg Val Arg Thr Thr
                       55
                                          60
   50
Leu Thr Leu Cys Val Glu Ala Ile Asp Phe Asp Ser Gln Ala Cys Gln
```

```
75
                70
Leu Arg Val Lys Gly Thr Asn Ile Gln Glu Asn Glu Tyr Val Lys Met
           85
Gly Ala Tyr His Thr Ile Glu Leu Glu Pro Asn Arg Gln Phe Thr Leu
        100 105 110
Ala Lys Lys Gln Trp Asp Ser Val Val Leu Glu Arg Ile Glu Gln Ala
     115
            120
Cys Asp Pro Ala Trp Ser Ala Asp Val Ala Ala Val Val Met Gln Glu
          135
                           140
Gly Leu Ala His Ile Cys Leu Val Thr Pro Ser Met Thr Leu Thr Arg
                               155
145 150
Ala Lys Val Glu Val Asn Ile Pro Arg Lys Arg Lys Gly Asn Cys Ser
           165
                            170
                                     175
Gln His Asp Arg Ala Leu Glu Arg Phe Tyr Glu Gln Val Val Gln Ala
               185
         180
Ile Gln Arg His Ile His Phe Asp Val Val Lys Cys Ile Leu Val Ala
                      200
                               205
Ser Pro Gly Phe Val Arg Glu Gln Phe Cys Asp Tyr Met Phe Gln Gln
                                  220
 210 215
Ala Val Lys Thr Asp Asn Lys Leu Leu Clu Asn Arg Ser Lys Phe
                      235 240
       230
Leu Gln Val His Ala Ser Ser Gly His Lys Tyr Ser Leu Lys Glu Ala
           245
                           250
Leu Cys Asp Pro Thr Val Ala Ser Arg Leu Ser Asp Thr Lys Ala Ala
         260 265 270
Gly Glu Val Lys Ala Leu Asp Asp Phe Tyr Lys Met Leu Gln His Glu
                     280
Pro Asp Arg Ala Phe Tyr Gly Leu Lys Gln Val Glu Lys Ala Asn Glu
                            300
                  295
Ala Met Ala Ile Asp Thr Leu Leu Ile Ser Asp Glu Leu Phe Arg His
                                 315
               310
Gln Asp Val Ala Thr Arg Ser Arg Tyr Val Arg Leu Val Asp Ser Val
                           330
           325
Lys Glu Asn Ala Gly Thr Val Arg Ile Phe Ser Ser Leu His Val Ser
                         345 350
Gly Glu Gln Leu Ser Gln Leu Thr Gly Val Ala Ala Ile Leu Arg Phe
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Pro Val Pro Glu Leu Ser Asp Gln Glu Gly Asp Ser Ser Ser Glu Glu
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ggeeggetaa ggtgegegtg etegetggtt etaaccette tgttgggegt ttetgetgag
180
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aggcgggagg cgctgagagt ctgtgcggag gtccgtggac agactgcttt gctcgttgtt
240
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tgctcggatg gcttcgcatt tccccaatac cccattaaac cgtatcatct gaagaggatc
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780
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900
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Cys Ser Asp Gly Phe Ala Phe Pro Gln Tyr Pro Ile Lys Pro Tyr His
                                25
Leu Lys Arg Ile His Arg Ala Val Leu Arg Gly Asn Leu Glu Glu Leu
        35
                            40
                                                45
Lys Tyr Leu Leu Leu Thr Tyr Tyr Asp Ile Asn Lys Arg Asp Arg Lys
Glu Arg Thr Ala Leu His Leu Ala Cys Ala Thr Gly Gln Pro Glu Met
                                        75
Val His Leu Leu Val Ser Arg Arg Cys Glu Leu Asn Leu Cys Asp Arg
                85
                                    90
Glu Asp Arg Thr Pro Leu Ile Lys Ala Val Gln Leu Arg Gln Glu Ala
           100
                                105
                                                    110
Cys Ala Thr Leu Leu Gln Asn Gly Ala Asp Pro Asn Ile Thr Asp
                                                125
Val Phe Gly Arg Thr Ala Leu His Tyr Ala Val Tyr Asn Glu Asp Thr
                        135
                                            140
   130
Ser Met Ile Glu Lys Leu Leu Ser His Gly Thr Asn Ile Glu Glu Cys
```

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160
                    150
                                        155
145
Ser Lys Asn Glu Tyr Gln Pro Leu Leu Ala Val Ser Arg Arg Lys
                                    170
                                                        175
               165
Val Lys Met Val Glu Phe Leu Leu Lys Lys Lys Ala Asn Val Asn Ala
           180
                                185
                                                    190
Ile Asp Tyr Leu Gly Arg Ser Ala Leu Ile Leu Ala Val Thr Leu Gly
        195
                           200
                                                205
Glu Lys Asp Ile Val Ile Leu Leu Gln His Asn Ile Asp Val Phe
                       215
   210
Ser Arg Asp Val Tyr Gly Lys Leu
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<213> Homo sapiens
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coggogatea egogotatty gttegeogoc acceptogocy tyccottygt eggcaaacte
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840
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gatcagaatg gcggaggcgg gagacacaac tggggccagg gctttcgact tggagaccag
960
tqaaqqqqqq qcctcqqqca gccqctcctc tcaaqccaca tttcctccca gtqctqqqtq
1020
cacttaacaa ctgcgttctg gctaacactg ttggacctga cccacactga atgtagtctt
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tragtargag araaagttto ttaaatcoog aagaaaaata taagtgttoo araagtttoa
cgattctcat tcaagtcctt actgctgtga agaacaaata ccaactgtgc aaattgcaaa
1200
actgactaca tittitggtg tittittit teceetitee gitetgaata atgggittita
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Tyr Trp Phe Ala Ala Thr Val Ala Val Pro Leu Val Gly Lys Leu Gly
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       20
Leu Ile Ser Pro Ala Tyr Leu Phe Leu Trp Pro Glu Ala Phe Leu Tyr
                         40
                                            45
Arg Phe Gln Ile Trp Arg Pro Ile Thr Ala Thr Phe Tyr Phe Pro Val
                                         60
                      55
Gly Pro Gly Thr Gly Phe Leu Tyr Leu Val Asn Leu Tyr Phe Leu Tyr
                                     75
                   70
Gln Tyr Ser Thr Arg Leu Glu Thr Gly Ala Phe Asp Gly Arg Pro Ala
                                90
             85
Asp Tyr Leu Phe Met Leu Leu Phe Asn Trp Ile Cys Ile Val Ile Thr
                                               110
          100
                  105
Gly Leu Ala Met Asp Met Gln Leu Leu Met Ile Pro Leu Ile Met Ser
                        120
                                            125
      115
Val Leu Tyr Val Trp Ala Gln Leu Asn Arg Asp Met Ile Val Ser Phe
                     135
                                        140
Trp Phe Gly Thr Arg Phe Lys Ala Cys Tyr Leu Pro Trp Val Ile Leu
                                    155
                  150
Gly Phe Asn Tyr Ile Ile Gly Gly Ser Val Ile Asn Glu Leu Ile Gly
                               170
              165
Asn Leu Val Gly His Leu Tyr Phe Phe Leu Met Phe Arg Tyr Pro Met
                             185
                                                190
           180
Asp Leu Gly Gly Arg Asn Phe Leu Ser Thr Pro Gln Phe Leu Tyr Arg
                200
      195
Trp Leu Pro Ser Arg Arg Gly Gly Val Ser Gly Phe Gly Val Pro Pro
                                        220
                    215
Ala Ser Met Arg Arg Ala Ala Asp Gln Asn Gly Gly Gly Arg His
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                                 235
Asn Trp Gly Gln Gly Phe Arg Leu Gly Asp Gln
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<213> Homo sapiens
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atgacaattt teacatetee egetteeeee teeaaagagt tetaettigte eaattetgaa
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gcaagagett tacctateta taccacatea getteaaaaa etateagata ttgtgaaaaa
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360
aagatggatc atccctgtcc ttgggtgaat aactgtgtgg gattttctaa ttacaaattc
ttcctgctgt ttttattgta ttccctatta tattgccttt tcgtggccgc acagttttag
480
agtacttaaa aaattttgga cgaaagaacc gaccaaaacc cgggccaaaa ttccacgtac
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720
getgtetgge tagecectee acaagteggt cactetgeac aaggaateeg agageteate
780
aaggatcage acggtetggg geccaggtgg ggtggaacac gcacggteca caagcaatte
tgtctttctc aaggettttt cttgtgcagt atgaaateet tcatatttca tatgaagtat
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975
<210> 3234
<211> 159
<212> PRT
<213> Homo sapiens
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                                    10
Glu Asn Gly Lys Thr Val Val Tyr Leu Val Ala Phe His Leu Phe Phe
                                25
                                                    30
           20
Val Met Phe Val Trp Ser Tyr Trp Met Thr Ile Phe Thr Ser Pro Ala
                            40
                                                 45
Ser Pro Ser Lys Glu Phe Tyr Leu Ser Asn Ser Glu Lys Glu Arg Tyr
   50
                        55
                                            60
Glu Lys Glu Phe Ser Gln Glu Arg Gln Gln Glu Ile Leu Arg Arg Ala
                    70
                                        75
Ala Arg Ala Leu Pro Ile Tyr Thr Thr Ser Ala Ser Lys Thr Ile Arg
```

```
85
                                    90
Tyr Cys Glu Lys Cys Gln Leu Ile Lys Pro Asp Arg Ala His His Cys
           100
                               105
                                                  110
Ser Ala Cys Asp Ser Cys Ile Leu Lys Met Asp His Pro Cys Pro Trp
                           120
                                               125
       115
Val Asn Asn Cys Val Gly Phe Ser Asn Tyr Lys Phe Phe Leu Leu Phe
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Leu Leu Tyr Ser Leu Leu Tyr Cys Leu Phe Val Ala Ala Gln Phe
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180
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<213> Homo sapiens
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Glu Met Tyr Asn Glu Ala Arg Arg Gln Leu Arg Asp Glu Ser Gln Leu
           20
                               25
Arg Gln Asp Val Glu Asn Glu Leu Ala Val Gln Val Ser Met Lys His
                           40
Glu Ile Glu Leu Ala Met Lys Leu Leu Glu Lys Asp Ile His Glu Lys
   50
                       55
                                           60
Gln Asp Thr Leu Ile Gly Leu Arg Gln Gln Leu Glu Glu Val Lys Ala
                   70
                                       75
Ile Asn Ile Glu Met Tyr Gln Lys Leu Gln Gly Ser Glu Asp Gly Leu
```

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90
                                                        95
Lys Glu Lys Asn Glu Ile Ile Ala Arg Leu Glu Glu Lys Thr Asn Lys
                               105
                                                    110
           100
Ile Thr Ala Ala Met Arg Gln Leu Glu Gln Arg Leu Gln Gln Ala Glu
        115
                            120
                                                125
Lys Ala Gln Met Glu Ala Glu Asp Glu Asp Glu Lys Tyr Leu Gln Glu
    130
                       135
                                            140
Cys Leu Ser Lys Ser Asp Ser Leu Gln Lys Gln Ile Ser Gln Lys Glu
                   150
                                        155
145
Lys Gln Leu Val Gln Leu Glu Thr Asp Leu Lys Ile Glu Lys Glu Trp
                165
                                    170
Arg Gln Thr Leu Gln Glu Asp
           180
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<212> DNA
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120
gatgaggacc gttgggaagt acggggggac cgcaaggccc ggaagcccct ggtggagaag
aagegaegeg egeggateaa egagagtett eaggagttge ggetgetget ggegggegee
240
gaggtgcagg ccaagctgga gaacgccgaa gtgctggagc tgacggtgcg gcgggtccag
ggtgtgctgc ggggccgggc gcgcgagcgc gagcagctgc aggcggaagc gagcgagcgc
360
ttegetgeeg getacateea gtgcatgeac gaggtgeaca egttegtgte caegtgeeag
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480
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540
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1020
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1140
gaacttgcca cttcageggg gagatgagag geaggtgcac teagetgcac tgeceagage
tgtgatgctc tgtacatctt gtttgtagca cacttgagtt tgtgtattcc attgacatca
aatgtgacaa ttttactaaa taaagaattt tggagttagt taccettgaa aaaaaagteg
1323
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<211> 249
<212> PRT
<213> Homo sapiens
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Gly Ala Gly Leu Arg Ala Leu Trp Thr Met Ala Pro Pro Ala Ala Pro
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Gly Asp Arg Lys Ala Arg Lys Pro Leu Val Glu Lys Lys Arg Arg Ala
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Arg Ile Asn Glu Ser Leu Gln Glu Leu Arg Leu Leu Leu Ala Gly Ala
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Glu Val Gln Ala Lys Leu Glu Asn Ala Glu Val Leu Glu Leu Thr Val
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Arg Arg Val Gln Gly Val Leu Arg Gly Arg Ala Arg Glu Arg Glu Gln
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Leu Gln Ala Glu Ala Ser Glu Arg Phe Ala Ala Gly Tyr Ile Gln Cys
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                                         125
Met His Glu Val His Thr Phe Val Ser Thr Cys Gln Ala Ile Asp Ala
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Thr Val Ala Ala Glu Leu Leu Asn His Leu Leu Glu Ser Met Pro Leu
145 150 155
Arg Glu Gly Ser Ser Phe Gln Asp Leu Leu Gly Asp Ala Leu Ala Gly
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Pro Pro Arg Ala Pro Gly Arg Ser Gly Trp Pro Ala Gly Gly Ala Pro
          180 185
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Gly Ser Pro Ile Pro Ser Pro Pro Gly Pro Gly Asp Asp Leu Cys Ser
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Asp Leu Glu Glu Ala Pro Glu Ala Glu Leu Ser Gln Ala Pro Ala Glu
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Gly Pro Asp Leu Val Pro Ala Ala Leu Gly Ser Leu Thr Thr Ala Gln
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2441

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Leu Arg Val Arg Ser Asn Val Leu Lys Gly Ala Ile Gln Asp Arg Val
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Gly Leu Leu Tyr Gln Phe Val Gly Ala Thr Pro Tyr Thr Gly Met Leu
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Asn Ala Val Asn Leu Phe Pro Val Leu Arg Ala Val Ser Asp Gln Glu
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Ser Gln Asp Gly Leu Tyr Gln Lys Trp Gln Met Met Leu Ala Tyr Ala
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           100
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Gly Thr Ala Gly Pro Ala Ser Gln Gly Arg Gly Gly His His Cys His
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Ser Arg Gly Pro Asp Trp Gln Gln Lys Gly Arg Leu Arg Arg Lys Val
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Ser Arg Lys Gln Asp Arg Gly Trp Thr Asn Gly Leu Pro Gln Pro His
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Leu Pro Met Lys Glu Gly Cys Thr Glu Val Ser Leu Leu Arg Val Gly
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Trp Ser Val Asp Phe Ser Arg Pro Gln Leu Gly Glu Asp Glu Phe Ser
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Tyr Gly Phe Asp Gly Arg Gly Leu Lys Ala Glu Asn Gly Gln Phe Glu
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Glu Phe Gly Gln Thr Phe Gly Glu Asn Asp Val Ile Gly Cys Phe Ala
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Asn Phe Glu Thr Glu Glu Val Glu Leu Ser Phe Ser Lys Asn Gly Glu
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Asp Leu Gly Val Ala Phe Trp Ile Ser Lys Asp Ser Leu Ala Asp Arg
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Ala Leu Leu Pro His Val Leu Cys Lys Asn Cys Val Val Glu Leu Asn
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Phe Gly Gln Lys Glu Glu Pro Phe Phe Pro Pro Pro Glu Glu Phe Val
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Phe Ile His Ala Val Pro Val Glu Glu Arg Val Arg Thr Ala Val Pro
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                                                    190
Pro Lys Thr Ile Glu Glu Cys Glu Val Ile Leu Met Val Gly Leu Pro
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Gly Ser Gly Lys Thr Gln Trp Ala Leu Lys Tyr Ala Lys Glu Asn Pro
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Glu Lys Arg Tyr Asn Val Leu Gly Ala Glu Thr Val Leu Asn Gln Met
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Arg Met Lys Gly Leu Glu Glu Pro Glu Met Asp Pro Lys Ser Arg Asp
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Leu Leu Val Gln Gln Ala Ser Gln Cys Leu Ser Lys Leu Val Gln Ile
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Ala Ser Arg Thr Lys Arg Asn Phe Ile Leu Asp Gln Cys Asn Val Tyr
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Asn Ser Gly Gln Arg Arg Lys Leu Leu Phe Lys Thr Phe Ser Arg
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Leu Ala Ser Ile Ile Ala Ala Thr Met Ala Arg Thr Val Tyr Cys Thr
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Asp Val Gly Ala Asp Leu Leu Ser Met Cys Gln Arg Asn Ile Ala Leu
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Asn Ser His Leu Ala Ala Thr Gly Gly Gly Ile Val Arg Val Lys Glu
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Leu Asp Trp Leu Lys Asp Asp Leu Cys Thr Asp Pro Lys Val Pro Phe
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Ser Trp Ser Gln Glu Glu Ile Ser Asp Leu Tyr Asp His Thr Thr Ile
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Leu Phe Ala Ala Glu Val Phe Tyr Asp Asp Asp Leu Thr Asp Ala Val
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Phe Lys Thr Leu Ser Arg Leu Ala His Arg Leu Lys Asn Ala Cys Thr
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Ala Ile Leu Ser Val Glu Lys Arg Leu Asn Phe Thr Leu Arg His Leu
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Leu Glu Gln Leu Thr Asp Gly Lys Leu Arg Phe Val Val Glu Pro Val
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Glu Ala Ser Phe Pro Gln Leu Leu Val Tyr Glu Arg Leu Gln Gln Leu
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Trp Ala Asp Ile Phe Lys Arg Phe Asn Ser Gly Thr Tyr Asn Asn Gln
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Trp Met Ile Val Asp Tyr Lys Ala Phe Ile Pro Gly Gly Pro Ser Pro
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Gly Ser Arg Val Leu Thr Ile Leu Glu Gln Ile Pro Gly Met Val Val
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Val Ala Asp Lys Thr Ser Glu Leu Tyr Gln Lys Thr Tyr Trp Ala Ser
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Tyr Asn Ile Pro Ser Phe Glu Thr Val Phe Asn Ala Ser Gly Leu Gln
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Ala Leu Val Ala Gln Tyr Gly Asp Trp Phe Ser Tyr Asp Gly Ser Pro
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Arg Ala Gln Ile Phe Arg Arg Asn Gln Ser Leu Val Gln Asp Met Asp
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Ala Leu Arg Gln Arg Ser His Gly Gly Ile Asp Val Lys Val Thr Ser
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Met Ser Leu Ala Arg Ile Leu Ser Leu Leu Ala Ala Ser Gly Pro Thr
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PIO	Leu	355	261	beu	Ser	710	360	AIG	V 0.1	GIU	GLY	365	Vu_	501	ALU
Gln	Ala 370	Ser	Ser	Ala	Thr	Ser 375	Gly	Ser	Ala	His	Leu 380	Ala	Gln	Met	Glu
Ala	Val	Leu	Arg	Glu	Asn	Ala	Arg	Leu	Gln	Arg	Asp	Asn	Glu	Arg	Leu
385	_			-1	390	a		~ 3	•	395	01	3	71 -	63	400
GIn	Arg	GIU	Leu	405	ser	Ser	ALA	GIU	Lys 410	Ala	GIY	Arg	11e	415	гàа
Leu	Glu	Ser	Glu 420	Ile	Gln	Arg	Leu	Ser 425	Glu	Ala	His	Glu	Ser 430	Leu	Thr
Arg	Ala	Ser 435	Ser	Lys	Arg	Glu	Ala 440	Leu	Glu	Lys	Thr	Met 445	Arg	Asn	Lys
Met	Asp 450	Ser	Glu	Met	Arg	Arg 455	Leu	Gln	Asp	Phe	Asn 460	Arg	Asp	Leu	Arg
Glu	Arg	Leu	Glu	Ser	Ala	Asn	Arg	Arg	Leu	Ala	Ser	Lys	Thr	Gln	Glu
465	a1-	21-	G1		470			1201	710	475	T 0.1	T 011	N 1 o	Cln.	480
Ala	GIN	Ala	Gly	485	GIN	Asp	Mec	val	490	Lys	Leu	reu	Ата	495	ser
Tyr	Glu	Gln	Gln 500	Gln	Glu	Gln	Glu	Lys 505	Leu	Glu	Arg	Glu	Met 510	Ala	Leu
Leu	Arg	Gly 515	Ala	Ile	Glu	Asp	Gln 520	Arg	Arg	Arg	Ala	Glu 525	Leu	Leu	Glu
Gln	Ala 530	Leu	Gly	Asn	Ala	Gln 535	Gly	Arg	Ala	Ala	Arg 540	Ala	Glu	Glu	Glu
Leu 545	Arg	Lys	Lys	Gln	Ala 550	Tyr	Val	Glu	Lys	Val 555	Glu	Arg	Leu	Gln	Gln 560
Ala	Leu	Gly	Gln	Leu 565	Gln	Ala	Ala	Cys	Glu 570	Lys	Arg	Glu	Gln	Leu 575	Glu
Leu	Arg	Leu	Arg 580	Thr	Arg	Leu	Glu	Gln 585	Glu	Leu	Lys	Ala	Leu 590	Arg	Ala
Gln	Gln	Arg 595	Gln	Ala	Gly	Ala	Pro 600	Gly	Gly	Ser	Ser	Gly 605	Ser	Gly	Gly
Ser	Pro 610	Glu	Leu	Ser	Ala	Leu 615	Arg	Leu	Ser	Glu	Gln 620	Leu	Arg	Glu	Lys
	Glu	Gln	Ile	Leu		Leu	Glu	Ala	Asp	Met 635	Thr	Lys	Trp	Glu	Gln 640
625 Lvs	Tvr	Leu	Glu	Glu	630 Arq	Ala	Met	Arq	Gln		Ala	Met	Asp	Ala	
-	•			645	_			_					_		
Ala									650					655	
			Ala 660	Ala				665	Thr				670	Ser	
Gln				Ala				665	Thr				670	Ser	
His	Pro Arg 690	Ser 675 His	660 Pro Gln	Ala Ser Glu	Ser Met	Ser Glu 695	Phe 680 Ser	665 Asn Arg	Thr Glu Leu	Gly Lys	Leu Val 700	Leu 685 Leu	670 Thr His	Ser Gly Ala	Gly Gln
His	Pro Arg 690	Ser 675 His	660 Pro	Ala Ser Glu	Ser Met	Ser Glu 695	Phe 680 Ser	665 Asn Arg	Thr Glu Leu	Gly Lys	Leu Val 700	Leu 685 Leu	670 Thr His	Ser Gly Ala	Gly Gln
His Ile 705	Pro Arg 690 Leu	Ser 675 His Glu	660 Pro Gln	Ala Ser Glu Asp	Ser Met Ala 710	Ser Glu 695 Val	Phe 680 Ser Ile	665 Asn Arg Lys	Thr Glu Leu Val	Gly Lys Leu 715	Leu Val 700 Gln	Leu 685 Leu Gln	670 Thr His Arg	Ser Gly Ala Ser	Gly Gln Arg 720
His Ile 705 Arg	Pro Arg 690 Leu Asp	Ser 675 His Glu Pro	660 Pro Gln Lys	Ala Ser Glu Asp Lys 725	Ser Met Ala 710 Ala	Ser Glu 695 Val	Phe 680 Ser Ile Gln	665 Asn Arg Lys Gly	Thr Glu Leu Val Ser 730	Gly Lys Leu 715 Leu	Leu Val 700 Gln Arg	Leu 685 Leu Gln Pro	670 Thr His Arg	Ser Gly Ala Ser Lys 735	Gly Gln Arg 720 Ser

755 760 765 Thr Thr Ala Asp Arg Ala Pro Thr Glu Glu Pro Val Val Thr Ala Pro 780 770 775 Pro Ala Ala His Ala Lys His Gly Ser Arg Asp Gly Ser Thr Gln Thr 795 790 Asp Gly Pro Pro Asp Ser Thr Ser Thr Cys Leu Pro Pro Glu Pro Asp 805 810 Ser Leu Leu Gly Cys Ser Ser Ser Gln Arg Ala Ala Ser Leu Asp Ser 820 825 Val Ala Thr Ser Arg Val Gln Asp Leu Ser Asp Met Val Glu Ile Leu 840 845 Ile <210> 3251 <211> 2595 <212> DNA <213> Homo sapiens <400> 3251 acgcgtggaa cggcgtagag aagagcttta tcgtcaatat tttgaggaaa tccagagacg ctttgatgcc gaaaggccgt tgattgttct gtgattgtgg tcaacaaaca gacaaaagac 120 tatgctgagt ctgtggggcg gaaggtgcga gacctaggca tggtagtgga cttgatcttc cttaacacag aagtgtcact gtcacaagcc ttggaggatg ttagcagggg aggttctcct tttgctattg tcatcacca gcaacaccag attcaccgct cctgcacagt caacatcatg tttggaaccc cgcaagagca tcgcaacatg ccccaagcag atgccatggt gctggtggcc agaaattatg agcgttacaa gaatgagtgc cgggagaagg aacgtgagga gattgccaga 420 caggcagcca agatggccga tgaagccatc ctgcaggaaa gagagagagg aggccctgag 480 gagggagtgc gtgggggcca ccctccagcc atccagagcc tcatcaacct gctggcagac 540 aacaggtacc tcactgctga agagactgac aagatcatca actacctgcg agagcggaag gagcggctga tgaggagcag caccgactct ctgcctggtg agctacgtgg caggccgagg cccgatttcc cgccaaccac tcggggcgac ctcgggtgcc tcgctgaaga cacagccaag ctcccaaccg ctccagageg gccaagtgct cccctctgct acacccactc catctgcacc ccccacctcc cagcaagage ttcaggccaa aatcctcage ctcttcaata gtggcacagt gacggccaat agcagctctg catccccctc ggttgctgcc ggaaacaccc caaaccagaa 900 tttttccaca qcaqcaaaca qccaqcctca acaaagatca caggcttctg gcaatcagcc tccaagcatt ttgggacagg gaggatctgc tcagaacatg ggccccagac ctggggctcc 1020

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ggataccctg 1200	atccagagtg	gccctgctct	ctcccacctg	gttagccaga	ccacagcaca
gatggggcag 1260	ccacaggccc	ccatgggatc	ttaccagagg	cattactgaa	gctaaatctt
tcaactctcc 1320	ccagtcccct	catcccctgg	cctcctccca	cttacttgtt	ctaaatagag
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1500		ttttttgttt			
1560		tgatggggtt			
1620		tttggaatgg			
1680		gctttccagc			
1740		agttgaagaa			
1800		gtttggggtc			
1860		ggcagccaca			
1920		ttttctttt	_		_
1980		cagcagttac			
2040		tcagcatccc			
2100		cacccgtttc			
2160		tgtctagact			
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2280		gaaattgtta			
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tgacctgttt 2520	gtgttatata	gtggtttttt	ttttcctctt	tggaactctt	gtgttgttaa
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Val Val Asp Leu Ile Phe Leu Asn Thr Glu Val Ser Leu Ser Gln Ala
                          40
Leu Glu Asp Val Ser Arg Gly Gly Ser Pro Phe Ala Ile Val Ile Thr
Gln Gln His Gln Ile His Arg Ser Cys Thr Val Asn Ile Met Phe Gly
                  70
                                     75
Thr Pro Gln Glu His Arg Asn Met Pro Gln Ala Asp Ala Met Val Leu
                                 90
Val Ala Arg Asn Tyr Glu Arg Tyr Lys Asn Glu Cys Arg Glu Lys Glu
          100
                             105
Arg Glu Glu Ile Ala Arg Gln Ala Ala Lys Met Ala Asp Glu Ala Ile
                         120
                                            125
Leu Gln Glu Arg Glu Arg Gly Gly Pro Glu Glu Gly Val Arg Gly Gly
                      135
                                         140
His Pro Pro Ala Ile Gln Ser Leu Ile Asn Leu Leu Ala Asp Asn Arg
                  150
                             155
Tyr Leu Thr Ala Glu Glu Thr Asp Lys Ile Ile Asn Tyr Leu Arg Glu
                                  170
              165
Arg Lys Glu Arg Leu Met Arg Ser Ser Thr Asp Ser Leu Pro Gly Glu
          180
                             185
Leu Arg Gly Arg Pro Arg Pro Asp Phe Pro Pro Thr Thr Arg Gly Asp
                        200
                                             205
      195
Leu Gly Cys Leu Ala Glu Asp Thr Ala Lys Leu Pro Thr Ala Pro Glu
            215
                                        220
Arg Pro Ser Ala Pro Leu Cys Tyr Thr His Ser Ile Cys Thr Pro His
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                                      235
Leu Pro Ala Arg Ala Ser Gly Gln Asn Pro Gln Pro Leu Gln
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gtaaaatggc atcaagggtc cccaccggtt caagatgggg accttgacta tatggcaatg
aagacaggga caccetggca gtagcaggta geetttggcc atetetgcag caggetggtg
240
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tttgggatcc acgaggcacg gaaagtcagc actctggagg acctggttgg ggtcaccctg
ggccaggtgc agatcgtggg aagctggata tgtgaaatgg caggtgctgg tgaacttgcg
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ctcgtcctcc ctcgtggcct catgttcctg tgatgggaag aagccgggga gtcccaggtc
420
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gttagggatg ggcctgtaaa actctttgtc ccggagttga gcatcgagct ttgcctgctc
ttgcggcgtg accctggagt atttgtgctt cctgtagggc tgatagtcga ccatgtggga
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Tyr Gln Ser Ser His Met Val Asp Tyr Gln Pro Tyr Arg Lys His Lys
           20
                               25
Tyr Ser Arg Val Thr Pro Gln Glu Gln Ala Lys Leu Asp Ala Gln Leu
                           40
                                               45
Arg Asp Lys Glu Phe Tyr Arg Pro Ile Pro Asn Pro Asn Pro Lys Leu
                                          60
                       55
Thr Asp Gly Tyr Pro Ala Phe Lys Arg Pro His Met Thr Ala Lys Asp
                                    75
                  70
Leu Gly Leu Pro Gly Phe Phe Pro Ser Gln Glu His Glu Ala Thr Arg
                                   90
               85
Glu Asp Glu Arg Lys Phe Thr Ser Thr Cys His Phe Thr Tyr Pro Ala
                              105
          100
Ser His Asp Leu His Leu Ala Gln Gly Asp Pro Asn Gln Val Leu Gln
                                              125
                           120
Ser Ala Asp Phe Pro Cys Leu Val Asp Pro Lys His Gln Pro Ala Ala
                                           140
                       135
   130
Glu Met Ala Lys Gly Tyr Leu Leu Leu Pro Gly Cys Pro Cys Leu His
                   150
                                      155
Cys His Ile Val Lys Val Pro Ile Leu Asn Arg Trp Gly Pro Leu Met
               165
Pro Phe Tyr Gln
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<210> 3255
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gcgagaggag aggacggcga tcgtagggga cacctgagag tcagaggccc gagggggctg
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ggactcatgt cgaggtcggg gaaggatgta aaacccggac ggacatcact gtaggccgca
180
atcttggcgg acacatcaca gctagccgcg aatcccgaag ggtcagcaga gcctagaaag
300
gaatatgagg ggggtcggaa tgaggcaggc gaaaggcacg gacgtgggag ggcacggcta
cccaacgggg acacctacga agggagctac gaattcggta aaagacatgg ccaggggatc
tacaaattta aaaatqqtqc tcqatatatc ggagaatatg ttagaaataa aaagcacggt
caaggcactt ttatatatcc agatggatcc agatatgaag gagagtgggc aaatgacctg
eggeaeggee atggegtata etaetaeate aataatgaca eetaeaetgg agagtggttt
600
gctcatcaaa ggcatgggca aggcacctat ttatacgcag agacgggcag taagtatgtt
ggcacctggg tgaacggaca gcaggagggc acggccgagc tcattcacct gaaccacagg
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tacc
724
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Ala Ala Asn Pro Glu Gly Ser Ala Glu Pro Arg Lys Glu Tyr Glu Gly
                               25
                                                  30
Gly Arg Asn Glu Ala Gly Glu Arg His Gly Arg Gly Arg Ala Arg Leu
                                              45
       35
                           40
Pro Asn Gly Asp Thr Tyr Glu Gly Ser Tyr Glu Phe Gly Lys Arg His
                                          60
                       55
Gly Gln Gly Ile Tyr Lys Phe Lys Asn Gly Ala Arg Tyr Ile Gly Glu
                                      75
65
                   70
Tyr Val Arg Asn Lys Lys His Gly Gln Gly Thr Phe Ile Tyr Pro Asp
               85
                                  90
Gly Ser Arg Tyr Glu Gly Glu Trp Ala Asn Asp Leu Arg His Gly His
                              105
           100
Gly Val Tyr Tyr Tyr Ile Asn Asn Asp Thr Tyr Thr Gly Glu Trp Phe
                           120
                                              125
Ala His Gln Arg His Gly Gln Gly Thr Tyr Leu Tyr Ala Glu Thr Gly
                                          140
   130
                      135
Ser Lys Tyr Val Gly Thr Trp Val Asn Gly Gln Glu Gly Thr Ala
                   150
                                      155
Glu Leu Ile His Leu Asn His Arg Tyr
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165

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agtgaagaca tcagccagac ctccaagtac agtcccatct actcgccaga cccctactat
180
getteggagt etgagtactg gacetaccat gggtececca aagtgeeceg agecagaagg
ttctcgtctg gaggagagga ggatgatttt gaccgcagca tgcacaagct ccaaagtgga
attggccggc tgattctgaa ggaagaaatg aaggcccggt cgagctccta tgcagatccc
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tggcgcgc
368
<210> 3258
<211> 122
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Pro Thr Phe Ser Arg Ser Pro His His Tyr Tyr Arg Ser Gly Asp Leu
                               25
           20
Ser Thr Ala Thr Lys Ser Glu Thr Ser Glu Asp Ile Ser Gln Thr Ser
                          40
                                               45
       35
Lys Tyr Ser Pro Ile Tyr Ser Pro Asp Pro Tyr Tyr Ala Ser Glu Ser
                        55
                                           60
Glu Tyr Trp Thr Tyr His Gly Ser Pro Lys Val Pro Arg Ala Arg Arg
                   70
                                       75
Phe Ser Ser Gly Gly Glu Glu Asp Asp Phe Asp Arg Ser Met His Lys
                                   90
               85
Leu Gln Ser Gly Ile Gly Arg Leu Ile Leu Lys Glu Glu Met Lys Ala
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                               105
Arg Ser Ser Ser Tyr Ala Asp Pro Trp Arg
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                           120
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<212> DNA
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caccattgaa cccggagcgc tgcggcgggg caacatgagc tccctgggct ttacgagcaa
ggagcagegg aacctgggcc ttctcgtgca cctcatgacc agcaacccca aaatcctgta
240
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tgtgggcaac gtgactcact atgcccaggt ctggctcaac atctcggcgg agatccgcag
360
cttcctggag cagggcaggc tgcagcaaca cctgcgctgg ctgcagcagt atgtagcaga
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480
acaggacaac ttctcgctgc ccagtggcat ggccctcctg cagcagctgg ataccattga
caacgeggee tgeggetgga tecagtteat gtecaaggtg agegtggaca tetteaaggg
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Gly Ser Glu Val Asp Arg Val Ile Leu Lys Ala Asn Glu Thr Phe Ala
                            40
                                                45
Phe Val Gly Asn Val Thr His Tyr Ala Gln Val Trp Leu Asn Ile Ser
                                            60
   50
                       55
Ala Glu Ile Arg Ser Phe Leu Glu Gln Gly Arg Leu Gln Gln His Leu
                                        75
                    70
Arg Trp Leu Gln Gln Tyr Val Ala Glu Leu Arg Leu His Pro Glu Ala
               85
                                    90
Leu Asn Leu Ser Leu Asp Glu Leu Pro Pro Ala Leu Arg Gln Asp Asn
            100
                                105
                                                    110
Phe Ser Leu Pro Ser Gly Met Ala Leu Leu Gln Gln Leu Asp Thr Ile
                                                125
                           120
        115
Asp Asn Ala Ala Cys Gly Trp Ile Gln Phe Met Ser Lys Val Ser Val
                       135
                                            140
Asp Ile Phe Lys Gly Phe Pro Asp Glu Glu Ser Ile Val Asn Tyr Thr
                                       155
                   150
Leu Asn Gln Ala Tyr Gln Asp Asn Val Thr Val Phe Ala Ser Val Ile
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                                                        175
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Phe Gln Thr Arg Lys Asp Gly Ser Ser Arg Leu Thr Cys Thr Thr Arg
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            20
                                25
Glu Phe Asp Lys Phe Leu Glu Glu Arg Ala Lys Ala Ala Glu Met Val
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Pro Asp Leu Pro Ser Pro Pro Met Glu Ala Pro Ala Pro Ala Ser Asn
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Pro Ser Gly Arg Lys Lys Pro Glu Arg Ser Glu Asp Ala Leu Phe Ala
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Leu
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gccaggaaac ctggccagaa ggagaagaag gtgcggcccg aggagaagca acaagccaag
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cccgtgaagg tggagcggac ccggaagcgg tccgagggct tctcgatgga caggaaggta
300
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aagaagattc gccgttacaa agcgaacaag gacgtaatgg agaaggcagc agaagtctat
acceggetea agtegegggt ceteggeeca aagategagg eggtgeagaa agtgaacaag
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gaggeeecc aggagaagge ggaggacaag eecageaceg ateteteage eecagtgaat
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780
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Ser Ser Asp Ser Glu Pro Glu Ala Glu Leu Glu Arg Glu Ala Lys Lys
      35
                      40
Ser Ala Lys Lys Pro Gln Ser Ser Ser Thr Glu Pro Ala Arg Lys Pro
  50
                    55
                                       60
Gly Gln Lys Glu Lys Arg Val Arg Pro Glu Glu Lys Gln Gln Ala Lys
                                    75
Pro Val Lys Val Glu Arg Thr Arg Lys Arg Ser Glu Gly Phe Ser Met
              85
                               90
Asp Arg Lys Val Glu Lys Lys Lys Glu Pro Ser Val Glu Glu Lys Leu
                          105
Gln Lys Leu His Ser Glu Ile Lys Phe Ala Leu Lys Val Asp Ser Pro
       115
               120
                                           125
Asp Val Lys Gly Cys Leu Asn Ala Leu Glu Glu Leu Gly Thr Leu Gln
                    135
                                       140
Val Thr Ser Gln Ile Leu Gln Lys Asn Thr Asp Val Val Ala Thr Leu
                 150
                                   155
Lys Lys Ile Arg Arg Tyr Lys Ala Asn Lys Asp Val Met Glu Lys Ala
             165
                       170
                                                  175
Ala Glu Val Tyr Thr Arg Leu Lys Ser Arg Val Leu Gly Pro Lys Ile
          180
                            185
Glu Ala Val Gln Lys Val Asn Lys Ala Gly Met Glu Lys Glu Lys Ala
                      200
                                           205
      195
Glu Glu Lys Leu Ala Gly Glu Glu Leu Ala Gly Glu Glu Ala Pro Gln
                   215
Glu Lys Ala Glu Asp Lys Pro Ser Thr Asp Leu Ser Ala Pro Val Asn
                         235
                 230
225
Gly Glu Ala Thr Ser Gln Lys Gly Glu Ser Ala Glu Asp Lys Glu His
                                 250
Glu Glu Gly Arg Asp Ser Glu Glu Gly Pro Arg Cys Gly Ser Ser Glu
           260
                            265
Asp Leu His Asp Ser Val Arg Glu Gly Pro Asp Leu Asp Arg Pro Gly
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280
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Ser Asp Arg Gln Glu Arg Glu Arg Ala Arg Gly Asp Ser Glu Ala Leu
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Asp Glu Glu Ser
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gagaaagtat aacttcattt tagaaattct cacctaaggc atttgaaaaa taatccaaaa
ggtacattat tgttgatttt tcttccttct agaaaggatc ttgttcgagt agaagccaca
240
gtcattgaaa agacagaatc atggccaaga atcattatga gattcaggaa aaggaaaaac
ttcaagaaga aaagaagtaa gttagagaaa gtaccgctgg gccctgttgc acggtgctgg
360
ttgcccaggc gcatgcggac ggagggtgtg gggcacgtgg gtctcgggac aggaagccca
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agagggteea geetegetee cetteteete caegeteeae gegt
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Glu Lys Val Pro Leu Gly Pro Val Ala Arg Cys Trp Leu Pro Arg Arg
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           20
Met Arg Thr Glu Gly Val Gly His Val Gly Leu Gly Thr Gly Ser Pro
                                                45
                            40
Gly Arg Ser Gln Pro Gly Cys His Cys Pro Leu Ala Thr Leu Ile Leu
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Glu Gly Ala Pro Arg Gly Ser Ser Leu Ala Pro Leu Leu His Ala
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Pro Arg
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120
cattgtggga agtttcaaga tgccttggag ccattgctca gctggttggc agataccgag
gageteatag ecaateagaa acetecatet getgagtata aagtggtgaa ageacagate
240
caagaacaga agttgctcca geggetecta gatgategaa aggecacagt agacatgett
caagcagaag gaggcagaat agcccagtca gcagagctgg ctgatagaga gaaaatcact
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ggacagctgg agagtcttga aagtagatgg act
393
<210> 3268
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Val Glu Tyr Ala Cys Arg Val Gln Gly Leu Glu His Asp Met Glu Glu
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Ile Asn Ala Arg Trp Asn Thr Leu Asn Lys Lys Val Ala Gln Arg Ile
            20
                                25
Ala Gln Leu Gln Glu Ala Leu Leu His Cys Gly Lys Phe Gln Asp Ala
       35
                            40
Leu Glu Pro Leu Leu Ser Trp Leu Ala Asp Thr Glu Glu Leu Ile Ala
                        55
Asn Gln Lys Pro Pro Ser Ala Glu Tyr Lys Val Val Lys Ala Gln Ile
                   70
Gln Glu Gln Lys Leu Leu Gln Arg Leu Leu Asp Asp Arg Lys Ala Thr
                                    90
               85
Val Asp Met Leu Gln Ala Glu Gly Gly Arg Ile Ala Gln Ser Ala Glu
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Leu Ala Asp Arg Glu Lys Ile Thr Gly Gln Leu Glu Ser Leu Glu Ser
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                                                125
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Arg Trp Thr
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aaatatagga tgtggaagcg aaaaaatatc tgggtagcaa gtgaggtgta ctcaaaaata
180
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agcaaaagtc acgtgggtct gattttatac cctcgctgga aagcttgttc tcagacacac
tgttactgca agtgtgtgt agggggaaac tctcacacac tttgcagttg aggacagggc
tagactttga ggtggaccct ggctcccagg gctgtgtact cccagcccgt gtttctcttt
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tgctcagact gaacaagtgg aacgaaatta cattaaagaa aagaaggcag cagtgaaaga
420
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getettegtg atecgeegge geteagetge ttgaetttet acagtgetet tetettgaee
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1200
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1260
tccttttatt tctttatttt ttgcttatac ttgtttttga aaacctcctc tgagtttgaa
1320
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gatacactct ccagtgcatt ttcatgtttt gaatcggatt agt
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                              25
                                                  30
           20
Pro Val Pro Ile Pro Asp Lys Arg Arg Lys Pro Ala Pro Ala Gln Leu
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45

40

35

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Asn Tyr Leu Leu Thr Asp Glu Gln Ile Met Glu Asp Leu Arg Thr Leu
                       55
                                           60
Asn Lys Leu Lys Ser Pro Lys Arg Pro Ala Ser Pro Ser Ser Pro Glu
                   70
                                       75
His Leu Pro Ala Thr Pro Ala Glu Ser Pro Ala Gln Arg Phe Glu Ala
                                  90
              85
Arg Ile Glu Asp Gly Lys Leu Tyr Tyr Asp Lys Arg Trp Tyr His Lys
                              105
Ser Gln Ala Ile Tyr Leu Glu Ser Lys Asp Asn Gln Lys Leu Ser Cys
                           120
                                               125
Val Ile Ser Ser Val Gly Ala Asn Glu Ile Trp Val Arg Lys Thr Ser
                       135
                                           140
   130
Asp Ser Thr Lys Met Arg Ile Tyr Leu Gly Gln Leu Gln Arg Gly Leu
                   150
                                       155
Phe Val Ile Arg Arg Arg Ser Ala Ala
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ggcagtctgt ggctctggcc cctccagttc cttgtcacca ggagataggc aatgcagctg
180
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gtgggcaggt gtgtactggg cagctcctta ttcttttcag ctacctggac ctcagtcttg
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geetteatag tecatteaga gttgatggta atggetaett ggtaggtgee aetgtetgta
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                                 1.0
Arg Arg Ala Gln Pro Thr Asp Ser Gly Thr Tyr Gln Val Ala Ile Thr
           20
                               25
Ile Asn Ser Glu Trp Thr Met Lys Ala Lys Thr Glu Val Gln Val Ala
       35
                           40
                                               45
Glu Lys Asn Lys Glu Leu Pro Ser Thr His Leu Pro Thr Asn Ala Gly
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60
                       55
Ile Leu Ala Ala Thr Ile Ile Gly Ser Leu Ala Ala Gly Ala Leu Leu
                  70
                                     75
Ile Ser Cys Ile Ala Tyr Leu Leu Val Thr Arg Asn Trp Arg Gly Gln
                               90
              85
Ser His Arg Leu Pro Ala Pro Arg Gly Gln Gly Ser Leu Ser Ile Leu
                   105
          100
Cys Ser Ala Val Ser Pro Val Pro Ser Val Thr Pro Ser Thr Trp Met
                120
Ala Thr Thr Glu Lys Pro Glu Leu Gly Pro Ala His
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   130
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<212> DNA
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aagtgcagaa ggcctgaaat aaccaactgg gtccgtctca cccgtgaaat aaaacacaag
180
aatattgtaa ottttoatga atggtatgaa acaagcaacc acctctggct agtggtggaa
ctccgcacag gtggttcctt aaaaacagtt attgctcaag atgaaaacct cccagaagat
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attetettg tgacatttet cetagga
<210> 3274
<211> 129
<212> PRT
<213> Homo sapiens
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Gly Ser Lys Thr Val Val Tyr Lys Gly Arg Arg Lys Gly Thr Ile Asn
                              25
Phe Val Ala Ile Leu Cys Thr Asp Lys Cys Arg Arg Pro Glu Ile Thr
       35
                          40
Asn Trp Val Arg Leu Thr Arg Glu Ile Lys His Lys Asn Ile Val Thr
Phe His Glu Trp Tyr Glu Thr Ser Asn His Leu Trp Leu Val Val Glu
                                     75
                  70
Leu Arg Thr Gly Gly Ser Leu Lys Thr Val Ile Ala Gln Asp Glu Asn
                                 90
Leu Pro Glu Asp Val Val Arg Glu Phe Gly Ile Asp Leu Ile Ser Gly
                             105
           100
Leu His His Leu His Lys Leu Gly Ile Leu Phe Val Thr Phe Leu Leu
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            20
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Cys Asp Ser Tyr Val Arg Pro Cys Thr Leu Val Arg Ile Cys Asp Glu
                           40
Cys Asn Tyr Gly Ser Tyr Gln Gly Arg Cys Val Ile Cys Gly Gly Pro
Gly Val Ser Asp Ala Tyr Tyr Cys Lys Glu Cys Thr Ile Gln Glu Lys
                   70
Asp Arg Asp Gly Cys Pro Lys Ile Val Asn Leu Gly Ser Ser Lys Thr
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Asp Leu Phe Tyr Glu Arg Lys Lys Tyr Gly Phe Lys Lys Arg
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                                105
<210> 3277
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<213> Homo sapiens
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cagacttccg totoottaaa atgttcatgc gtaagtgcgt ggcagaagcg gctcaagcgc
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240
gacgccgcgg tcaggacgtc gaagccaaag aagaccagag ccagccgggt ggcacagcgg
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420
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540
gagaaggeee gteaggeeet ggeeageate ageaagteag gagetgeegg eggetetgee
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660
ctttgcagca gcagcagtac taccagtggt accagcagta caactatgcc tacccctaca
getactacta teccatgage atgtaccaga getatggete ecetteccag tatgggatgg
780
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ccggctccta tggctageca caccccagea gccatccgca ccccaacacc aagggactct
gaaccagece ccagtecceg geatggatga gageatgtee taccaggete ecceteagea
gctgccgtcg gctcagcccc ctcagccctc aaatccccca catggggctc acacgctgaa
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cagtggccct cagcctggga cagctccagc cacacagcan ncagccaggc ggggcccgcc
1020
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1260
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Tyr Ser Met Val Ala Gly Ala Gly Arg Glu Asn Gly Met Glu Thr Pro
            20
                                25
Met His Glu Asn Pro Glu Trp Glu Lys Ala Arg Gln Ala Leu Ala Ser
                                                45
       35
                            40
Ile Ser Lys Ser Gly Ala Ala Gly Gly Ser Ala Lys Ser Ser Ser Asn
                                            60
   50
                        55
Gly Pro Val Ala Ser Ala Ser Thr Cys Pro Arg Gln Lys Pro Gln Leu
                                        75
                    70
Cys Ser Ser Ser Ser Thr Thr Ser Gly Thr Ser Ser Thr Thr Met Pro
                                    90
                85
Thr Pro Thr Ala Thr Thr Ile Pro
            100
<210> 3279
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<212> DNA
<213> Homo sapiens
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ccaagcaget ecceateget eeggaaaegg etgeagetee tgeecceaag eeggeeccea
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cctgagccag aaccaggcac catggtggag aagggatcag atagctcctc agagaagggt
qqqqtqcctq ggacccccaq cacccaqagc ctaggcagcc ggaacttcat ccgcaacagc
aagaagatgc agagctggta cagtatgctg agccccactt ataagcagcg taatgaggac
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540
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660
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1020
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Gly Arg Ser Thr Pro Ser Ser Ser Pro Ser Leu Arg Lys Arg Leu Gln
                                25
            20
Leu Leu Pro Pro Ser Arg Pro Pro Pro Glu Pro Glu Pro Gly Thr Met
                            40
Val Glu Lys Gly Ser Asp Ser Ser Ser Glu Lys Gly Gly Val Pro Gly
                        55
                                            60
Thr Pro Ser Thr Gln Ser Leu Gly Ser Arg Asn Phe Ile Arg Asn Ser
65
                    70
Lys Lys Met Gln Ser Trp Tyr Ser Met Leu Ser Pro Thr Tyr Lys Gln
                85
                                    90
Arg Asn Glu Asp Phe Arg Lys Leu Phe Ser Lys Leu Pro Glu Ala Glu
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Arg Leu Ile Val Asp Tyr Ser Cys Ala Leu Gln Arg Glu Ile Leu Leu

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Gln Gly Arg Leu Tyr Leu Ser Glu Asn Trp Ile Cys Phe Tyr Ser Asn
                   135
                                          140
   130
Ile Phe Arg Trp Glu Thr Thr Ile Ser Ile Gln Leu Lys Glu Val Thr
                                    155
145
                  150
Cys Leu Lys Lys Glu Lys Thr Ala Lys Leu Ile Pro Asn Ala Ile Gln
                                 170
              165
Ile Cys Thr Glu Ser Glu Lys His Phe Phe Thr Ser Phe Gly Ala Arg
                              185
                                                 190
           180
Asp Arg Cys Phe Leu Leu Ile Phe Arg Leu Trp Gln Asn Ala Leu Leu
                                             205
                         200
Glu Lys Thr Leu Ser Pro Arg Glu Leu Trp His Leu Val His Gln Cys
                                          220
                      215
Tyr Gly Ser Glu Leu Gly Leu Thr Ser Glu Asp Glu Asp Tyr Val Ser
                 230
                                    235
Pro Leu Gln Leu Asn Gly Leu Gly Thr Pro Lys Glu Val Gly Asp Val
                                                     255
             245
Ile Ala Leu Ser Asp Ile Thr Ser Ser Gly Ala Ala Asp Arg Ser Gln
                             265
                                                 270
          260
Glu Pro Ser Pro Val Gly Ser Arg Arg Gly His Val Thr Pro Asn Leu
                           280
                                             285
       275
Ser Arg Ala Ser Ser Asp Ala Asp His Gly Ala Glu Glu Asp Lys Glu
                                         300
                      295
   290
Glu Gln Val Asp Ser Gln Pro Asp Ala Ser Ser Ser Gln Thr Val Thr
                                      315
                 310
Pro Val Ala Glu Pro Pro Ser Thr Glu Pro Thr Gln Pro Asp Gly Pro
                                  330
              325
Thr Thr Leu Gly Pro Leu Asp Leu Leu Pro Ser Glu Glu Leu Leu Thr
                                                 350
                     345
           340
Asp Thr Ser Asn Ser Ser Ser Ser Thr Gly Glu Glu Ala Asp Leu Ala
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Ala Leu Leu Pro Asp Leu Ser Gly
                      375
   370
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ggcaaggagg tagagccagc ggctgaggac ctgtcagggc cagtcccagc tctgcagctt
180
getgtgtgae etggeacaca tectetecet geetecetea gtetetteee etgeaagaeg
gggtcctgac acggatctca tgggattgct ctgaggccca ggcagtccca ggctcaacca
300
ctggttcaca aagtgtgttg tttccaggaa gaacagatgg gggcgcctga gggcaaaggg
360
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cctgagtgtg ggtcgaggat atgccggctg ctcgctcagg ggctgggttt tcatcttgtg
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ccacatgatg ttcctttcct cttgcaaaag aagttgctgg aaggcccact gtccagcagc
540
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660
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actocagagg coettgtget tgcagcaggg aggtcaagge cagggcgtet gaccccggcc
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840
tc
842
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<212> PRT
<213> Homo sapiens
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               5
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           20
                               25
                                                   30
Pro Trp Pro Arg Gln Pro Gly Gly Cys Trp Thr Val Gly Leu Pro Ala
       35
                           40
Thr Ser Phe Ala Arg Gly Lys Glu His His Val Gly His Ile His Glu
  50
                       5.5
                                           60
Gly Thr Gly Asn Ser Val Val Pro Ser Val Thr Pro Cys Gln Asp Thr
                   70
                                       75
Gln Asp Glu Asn Pro Ala Pro Glu Arg Ala Ala Gly Ile Ser Ser Thr
                                   90
              85
His Thr Gln Ala Leu Cys Pro Gln Ala Pro Pro Ser Val Leu Pro Gly
           100
                               105
                                                   110
Asn Asn Thr Leu Cys Glu Pro Val Val Glu Pro Gly Thr Ala Trp Ala
                          120
                                              125
Ser Glu Gln Ser His Glu Ile Arg Val Arg Thr Pro Ser Cys Arg Gly
   130
                       135
                                          140
Arg Asp
145
<210> 3283
<211> 3268
<212> DNA
<213> Homo sapiens
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60
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	370	_	_	_	_	375	_				380		~3	-	•
	Ala	Tyr	Asn	Ser		Lys	arg	GIN	GIU		GIU	ser	GIU	ASII	Lys 400
385	*	T	2	7	390	2	C1	T 0	A ~~	395	717	นาไ	717	λου	
rys	Leu	Lys	Asn	Asp	Leu	ASN	GIU	Leu	410	nys	Ald	vai	Ald	415	GIII
220	Th-	~1~	200	405 Asn	C ~ ~	C ~ ~	ui a	~1··		Pro	7 00	car	Tur		Lou
Ald	Inr	GIII	420	ASII	ser	261	uis	425	361	PIO	wsb	361	430	361	Беа
T 011	t 0	Nan		Leu	Tvc	T 011	ת ו ת		Glu	Glu	Len	Glu		Ara	Lve
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G1 vi	C1.,		Tan	Ile	T av) ra		Cln.	Tla	Val	Ser		Δen	Gln	Δνα
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Leu					710					715					
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Asn					Gln				730	Glu				735	Gln
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810

805

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Cys Glu Leu Arg Leu Gln Lys Arg Thr His Thr Val Ala Asp Lys Thr
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Gln Ala Arg Arg Met Phe Glu Ser Gln Ser Ala Leu Ser Leu Val Pro
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Val Thr Ser Tyr Val Gln Leu Pro Gly Pro Ile Pro Tyr Ser Asp Cys
                                    90
                                                        95
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Arg Leu Arg Thr Glu Asp Ala Pro Leu Leu Ser Leu His Phe Asp Leu
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                                                    110
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Leu Phe Pro Leu Lys Thr Arg Arg Pro Ala Phe Pro Lys Thr Ala Trp
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Gly Ala Pro Ser Ala His Leu Asp Gly Ala Gly Asp Ala Gln Arg Arg
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Phe Arg Ala Leu Tyr Phe Gln Leu Gln His Ser Gln Val Phe Thr Ala
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                                105
Gln Gly Asp Gly Ala Arg Val Thr Arg Asn Pro Gly Glu Gly Arg Ser
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Ala Val Arg Leu Pro Ala Pro Ser Pro Thr Ile Ala Ala Ser Val Pro
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Pro His Trp Leu Phe Thr Trp Leu Ala Val Ser Val Ser Gln Pro Gly
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Asp Arg Arg Ser Thr Glu Pro Ser Val Thr Pro Asp Leu Leu Asn Phe
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                            40
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Lys Lys Gly Trp Leu Thr Lys Gln Tyr Glu Asp Gly Gln Trp Lys Lys
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His Trp Phe Val Leu Ala Asp Gln Ser Leu Arg Tyr Tyr Arg Asp Ser
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Val Ala Glu Glu Ala Ala Asp Leu Asp Gly Glu Ile Asp Leu Ser Ala
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Cys Tyr Asp Val Thr Glu Tyr Pro Val Gln Arg Asn Tyr Gly Phe Gln
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           100
                                105
Ile His Thr Lys Glu Gly Glu Phe Thr Leu Ser Ala Met Thr Ser Gly
                                                125
       115
                            120
Ile Arg Arg Asn Trp Ile Gln Thr Ile Met Lys His Val His Pro Thr
                        135
                                            140
   130
Thr Ala Pro Asp Val Thr Ser Ser Leu Pro Glu Glu Lys Asn Lys Ser
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Ser Cys Ser Phe Glu Thr Cys Pro Arg Ser Thr Glu Lys Gln Glu Ala
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Glu Leu Gly Glu Pro Asp Pro Glu Gln Lys Arg Ser Arg Ala Arg Glu
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2640	ttggtgccct				
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Ile Ser Leu Val Met Lys Thr Pro Arg Val Ala Lys Asn Glu Ala Leu
            40
Trp His Pro Thr Leu Asn Leu Pro Leu Ser Pro Gln Gly Thr Val Arg
                                    60
                  55
Thr Ala Val Glu Phe Gln Val Met Thr Gln Thr Gln Ser Leu Ser Phe
              70
                                75
Leu Leu Gly Ser Ser Ala Ser Leu Asp Cys Gly Phe Ser Met Ala Pro
                        90
           85
Gly Leu Asp Leu Ile Ser Val Glu Trp Arg Leu Gln His Lys Gly Arg
        100 105
Gly Gln Leu Val Tyr Ser Trp Thr Ala Gly Gln Gly Gln Ala Val Arg
   115 120
Lys Gly Ala Thr Leu Xaa Ala Cys Thr Thr Gly His Gly Xaa Arg Asp
  130 135
                                    140
Ala Ser Leu Thr Leu Pro Gly Leu Thr Ile Gln Asp Glu Gly Thr Tyr
                                155
145 150
Ile Cys Gln Ile Thr Thr Ser Leu Tyr Arg Ala Gln Gln Ile Ile Gln
            165
                            170
Leu Asn Ile Gln Ala Ser Pro Lys Val Arg Leu Ser Leu Ala Asn Glu
                         185
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Ala Leu Leu Pro Thr Leu Ile Cys Asp Ile Ala Gly Tyr Tyr Pro Leu
     195 200 205
Asp Val Val Thr Trp Thr Arg Glu Glu Leu Gly Gly Ser Pro Ala
           215
                           220
Gln Val Ser Gly Ala Ser Phe Ser Ser Leu Arg Gln Ser Val Ala Gly
225 230 235
Thr Tyr Ser Ile Ser Ser Ser Leu Thr Ala Glu Pro Gly Leu Cys Arg
            245 250 255
Cys His Leu His Leu Pro Gly His Thr His Leu Ser Gly Gly Ala Pro
                         265
Trp Gly Gln His Pro Gly Cys Pro Thr Arg Ala Glu Asn Ser Leu Gly
                                       285
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Ser His Leu Cys Gln Gln Ser Leu Pro Ser Cys Thr Asp Val Pro Gly
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Ala Ser Glu Thr Ala Ser Thr Tyr Arg Thr Trp Ala Ala Ser Gly
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tggaaggcga ggcaggtcac cagcactgtc ctctgcagga tgggctggga ttcatttggc
240
agetteteag ggeetgtgte eggetggttg gteeetgtge tgeecaaace aggtgteeac
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                                25
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            20
Pro Arg Trp Glu Pro Cys Leu Gly Gln Gly Gly Arg Val Asp Gly Ser
                                                45
                            40
       35
Trp Asp Cys Asp Ile Gly Arg Arg Gly Arg Ser Pro Ala Leu Ser Ser
   50
                        55
                                            60
Ala Gly Trp Ala Gly Ile His Leu Ala Ala Ser Gln Gly Leu Cys Pro
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Ala Gly Trp Ser Leu Cys Cys Pro Asn Gln Val Ser Thr Phe Pro Ala
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Pro Met Arg Arg Glu Gly Gly Arg Trp Trp Leu Gly Trp Arg
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ccccaggacc ccaagtacca gggtctgcgg gcacgtggcc gggagatccg gaaggagctt
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gagaaacteg acateateeg teagaagege etgteeeaeg tgtetggeea eeggteetat
420
tacctgcgcg gggctggagc cctcctgcag cacggcctgg tcaacttcac attcaacaag
480
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cttctccgcc ggggcttcac ccccatgacg gtgccagacc ttctccgcgg agcagtgttt
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<212> PRT
<213> Homo sapiens
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                             25
Ala Gln Leu Glu Gln Gln Phe Tyr Leu Gln Ala Leu Lys Leu Pro Asn
                        40
     35
                                           4.5
Gln Thr His Pro Asp Val Pro Val Gly Asp Glu Ser Gln Ala Arg Val
                     55
Leu His Met Val Gly Asp Lys Pro Val Phe Ser Phe Gln Pro Arg Gly
                  70
                                     75
His Leu Glu Ile Gly Glu Lys Leu Asp Ile Ile Arg Gln Lys Arg Leu
              85
                                 90
Ser His Val Ser Gly His Arg Ser Tyr Tyr Leu Arg Gly Ala Gly Ala
          100
                            105
Leu Leu Gln His Gly Leu Val Asn Phe Thr Phe Asn Lys Leu Leu Arg
                                          125
      115
                         120
Arg Gly Phe Thr Pro Met Thr Val Pro Asp Leu Leu Arg Gly Ala Val
   130
                      135
                                         140
Phe Glu Gly Cys Gly Met Thr Pro Asn Ala Asn Pro Ser Gln Ile Tyr
145
                 150
                          155
Asn Ile Asp Pro Ala Arg Phe Lys Asp Leu Asn Leu Ala Gly Thr Ala
              165
                                170
Glu Val Gly Leu Ala Gly Tyr Phe Met Asp His Thr Val Ala Phe Arg
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                           185
                                                190
Asp Leu Pro Val Arg Met Val Cys Ser Ser Thr Cys Tyr Arg Ala Glu
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Thr Asn
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<212> DNA
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taccageget atggagteeg gteetacetg caccagtttt atgaggactg tacageetea
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360
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                                                    30
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Phe Tyr Glu Asp Cys Thr Ala Ser Ile Trp Glu Tyr Glu Asp Asp Phe
                                                45
       35
                            40
Gln Ile Gln Arg Ser Pro Asn Arg Trp Ser Ser Val Phe Trp Lys Val
Gly Leu Ile Ser Gly Thr Val Phe Val Ile Leu Gly Leu Thr Val Leu
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Ala Val Gly Phe Leu Val Pro Pro Lys Ile Glu Ala Phe Gly Glu Ala
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Asp Phe Val Val Asp
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ctgcgaagtc atcataaagt ttctgtttca cccgtcgtcc atgttcgagg actctgtgaa
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tctgtggtgg aagcagacct cgtggaagcg ctggaaaaat ttgggacaat atgctatgtg
300
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300
tacgaccggg aggtccacct gcgttgtgag ctctcaccgg gctactacct ggctgtcccc
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420
gtetecetta ggtgagagga accgegeagt getgetgget etecgaggee acaggeeett
ccaaggcagg atttgggcac tttccctctg tggttggcag gtgtccatgt gggaactgag
gccaccggga acctgctgcc agcgccctcc catgtttgtc ttcttggcag cgccatcagg
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gcagtggcca
610
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Leu Ser Trp His Arg Gly Pro Pro Cys Glu Val Tyr Ile Ala Val Leu
            20
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Gln Arg Ser Arg Leu His Ala Ala Asp Trp Ala Gly Arg Ala Arg Ala
Leu Val Gly Asp Ser His Thr Ser Trp Ser Pro Ala Ser Ile Pro Gly
                                            60
                        55
Lys His Tyr Gln Ala Val Gly Leu His Leu Trp Lys Val Glu Lys Arg
                    70
                                        75
Arg Val Asn Leu Pro Arg Val Leu Ser Met Pro Pro Val Ala Gly Thr
                85
                                    90
                                                        95
Ala Cys His Ala Tyr Asp Arg Glu Val His Leu Arg Cys Glu Leu Ser
           100
                                105
                                                    110
Pro Gly Tyr Tyr Leu Ala Val Pro Ser Thr Phe Leu Lys Asp Ala Pro
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Gly Glu Phe Leu Leu Arg Val Phe Ser Thr Gly Arg Val Ser Leu Arg
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120
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ctgacggagt tatttattca attagaacaa atggtgtgct tctatttata ccaaggtttg
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960
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1080
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Ala Tyr Met Xaa Asn Val Leu Ser Arg Ala Arg Trp Leu Thr Pro Val
           20
                              25
Thr Pro Ala Leu Trp Glu Ala Glu Ala Gly Gly Ser Arg Gly Gln Glu
Ile Glu Thr Ile Leu Ala Asn Thr Val Lys
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2329
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Lys Lys Arg Lys Arg Glu Arg Glu His Cys Asp Thr Glu Gly Glu Ala
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Asp Asp Phe Asp Pro Gly Lys Lys Val Glu Val Glu Pro Pro Pro Asp
                          40
                                             45
Arg Pro Val Arg Ala Cys Arg Thr Gln Gln Pro Glu Met Glu Arg Thr
                      55
His Ile Gln Gln Leu Leu Glu His Phe Leu Arg Gln Leu Gln Arg Lys
Asp Pro His Gly Phe Phe Ala Phe Pro Val Thr Asp Ala Ile Ala Pro
                                  90
Gly Tyr Ser Met Ile Ile Lys His Pro Met Asp Phe Gly Thr Met Lys
           100
                              105
                                                 110
Asp Lys Ile Val Ala Asn Glu Tyr Lys Ser Val Thr Glu Phe Lys Ala
                          120
       115
Asp Phe Lys Leu Met Cys Asp Asn Ala Met Thr Tyr Asn Arg Pro Asp
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140
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                        135
Thr Val Tyr Tyr Lys Leu Ala Lys Lys Ile Leu His Ala Gly Phe Lys
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                   150
145
Met Met Ser Lys Gln Ala Ala Leu Leu Gly Asn Glu Asp Thr Ala Val
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                165
Glu Glu Pro Val Pro Glu Val Val Pro Val Gln Val Glu Thr Ala Lys
                                185
                                                    190
            180
Lys Ser Lys Lys Pro Ser Arg Glu Val Ile Ser Cys Met Phe Glu Pro
                            200
                                                205
        195
Glu Gly Asn Ala Cys Ser Leu Thr Asp Ser Thr Ala Glu Glu His Val
                                            220
                        215
Leu Ala Leu Val Glu His Ala Ala Asp Glu Ala Arg Asp Arg Ile Asn
                    230
Arg Phe Leu Pro Gly Gly Lys Met Gly Tyr Leu Lys Arg Asn Gly Asp
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Glu Glu Glu Thr His Pro Val Thr
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120
gcccttacaa aggcggcaga gggtggatta tcttcacctg aattttcaga gctctgtatt
tggttaggct ctcaaataaa atcattatgc aacttggaag aaagtatcac gtctgctggg
240
agagatgacc tagagagctt ccagcttgag ataagtgggt ttttaaaaaga gatggcctgt
ccatactcgg tactcgtctc aggagacatt aaagagcgcc tcacaaagaa ggatgactgc
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ctactgaaaa tggatttaaa ttcagaacag gcggaacaac tggaaagaat caatgatgct
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720
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722
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Lys Gly Pro Leu Leu Glu Glu Gln Ala Leu Thr Lys Ala Ala Glu Gly
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Gly Leu Ser Ser Pro Glu Phe Ser Glu Leu Cys Ile Trp Leu Gly Ser
                     55
Gln Ile Lys Ser Leu Cys Asn Leu Glu Glu Ser Ile Thr Ser Ala Gly
Arg Asp Asp Leu Glu Ser Phe Gln Leu Glu Ile Ser Gly Phe Leu Lys
             85
                                90
Glu Met Ala Cys Pro Tyr Ser Val Leu Val Ser Gly Asp Ile Lys Glu
                     105
                                       110
Arg Leu Thr Lys Lys Asp Asp Cys Leu Lys Leu Leu Phe Leu Ser
                         120
                                             125
      115
Thr Glu Leu Gln Ala Leu Gln Ile Leu Gln Asn Lys Lys His Lys Asn
                      135
                                        140
Ser Gln Leu Asp Lys Asn Ser Glu Val Tyr Gln Glu Val Gln Ala Met
                  150
                                     155
145
Phe Asp Thr Leu Gly Ile Pro Lys Ser Thr Thr Ser Asp Ile Pro His
                                 170
              165
Met Leu Asn Gln Val Glu Ser Lys Val Lys Asp Ile Leu Ser Lys Val
                              185
                                                 190
          180
Gln Lys Asn His Val Gly Lys Pro Leu Leu Lys Met Asp Leu Asn Ser
      195
                         200
Glu Gln Ala Glu Gln Leu Glu Arg Ile Asn Asp Ala Leu Ser Cys Glu
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Tyr Glu Cys Arg Arg Arg Met Leu Met Lys Arg Leu Asp Val Thr Val
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cccagggcga ccccttctgc caagtgtccc aaaatgattg ctaaatgcct ggctccccca
ctctttgact ccatctcttg gttccctctt tctgctgcca gctcccccga ctcttccctg
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333
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Lys Gly Asp Thr Lys Arg Ser Pro Gln Gly Arg Val Gly Gly Ala Gly
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Ser Arg Lys Arg Glu Pro Arg Asp Gly Val Lys Glu Trp Gly Ser Gln
       35
                            40
Ala Phe Ser Asn His Phe Gly Thr Leu Gly Arg Arg Gly Arg Pro Gly
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Gly Thr Lys Gly Leu Gly Cys Ser Leu Ser Val Pro Asp Pro Cys Gln
Ala Lys Met Val Trp Gln Arg Gly Glu Gln Leu Leu Pro Arg Ala Ser
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Phe Pro Ser Ala Pro Phe Thr Arg
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300
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2307

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Gly Asp Gln Asp Gly Ala Ala Met Asp Ser Val Pro Leu Ile Ser Pro
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           20
Leu Asp Ile Ser Gln Leu Gln Pro Pro Leu Pro Asp Gln Val Val Ile
                                                45
       35
                           40
Lys Thr Gln Thr Glu Tyr Gln Leu Ser Ser Pro Asp Gln Gln Asn Phe
                       55
                                            60
Pro Asp Leu Glu Gly Gln Arg Leu Asn Cys Ser His Pro Glu Glu Gly
                                        75
                    70
Arg Arg Leu Pro Thr Ala Arg Met Ile Ala Phe Ala Met Ala Leu Leu
               85
Gly Cys Val Leu Ile Met Tyr Lys Ala Ile Trp Tyr Asp Gln Phe Thr
                                                   110
           100
                               105
Cys Pro Asp Gly Phe Leu Leu Arg His Lys Ile Cys Thr Pro Leu Thr
                                                125
       115
                           120
Leu Glu Met Tyr Tyr Thr Glu Met Asp Pro Glu Arg His Arg Ser Ile
                                            140
   130
                      135
Leu Ala Ala Ile Gly Ala Tyr Pro Leu Ser Arg Lys His Gly Thr Glu
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145
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Thr Pro Ala Ala Trp Gly Asp Gly Tyr Arg Ala Ala Lys Glu Glu Arg
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Lys Gly Pro
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egeceageee etgetegetg eecetaceea etatgeeggg gaegeegagt ggeteagtga
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519
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            20
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Pro Ser Lys Arg Pro Ser Lys Ile Gly Phe Asp Glu Val Phe Val Ile
Ser Leu Ala Arg Arg Pro Asp Arg Arg Glu Arg Met Leu Ala Ser Leu
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Trp Glu Met Glu Ile Ser Gly Arg Val Val Asp Ala Val Asp Gly Trp
                                        75
                                                             80
Met Leu Asn Ser Ser Ala Ile Arg Asn Leu Gly Val Asp Leu Leu Pro
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                                    90
Gly Tyr Gln Asp Pro Tyr Ser Gly Arg Thr Leu Thr Lys Gly Glu Val
                                105
                                                    110
            100
Gly Cys Phe Leu Ser His Tyr Ser Ile Trp Glu Glu Arg Ala Val Gln
                                                125
                            120
       115
Gly Thr Leu Leu Ala Thr Gly Pro Gly Gly Leu Leu Arg Pro Ala Pro
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Ala Arg Cys Pro Tyr Pro Leu Cys Arg Gly Arg Arg Val Ala Gln
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1080			cttcccctat		
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2100			cctactctcc		
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3180		atggatetgt			
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3600		agtcaatggc			
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3720		taaatcgccc			
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gaaaactggc 3840	atacaagagc	ccggaacttc	tgccgatttg	tcactgcaat	caacaatact

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4320
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Gly Pro Ser Arg Gly Ser Gly Gly Gly Gly Arg Gly Leu Arg Ala
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        35
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Asp Gly Arg Ala Pro Gly Leu Arg Gly Leu Gly Ala Ala Pro His Cys
    50
                       55
                                            60
Pro Ala Gly Leu Gly Pro Gly Ala Met Ser Gly Gly Gly Gly Gly
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65				_	70	_,		•		75				~ 1	80
Gly	ser	Ala	Pro		Arg	Phe	Ala	Asp		Phe	Val	He	Cys		Leu
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Asp	Thr	GIU			Leu	GIU	Pro		GIU	Leu	Ser	Ala		Cys	Gln
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Tyr	He		Ala	Ser	Lys	Ala	_	Asp	GLY	Ala	Ser		Phe	Ile	Ser
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Ser	Thr	Thr	Glu	Gly	Glu	Asn	Phe	Glu	Gln	Thr	Pro	Leu	Arg	Arg	Thr
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Phe	Lys	Ser	Lys	Val	Leu	Ala	Arg	Tyr	Pro	Glu	Asn	Val	Glu	Trp	Asn
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Pro	Phe	Asp	Gln	Asp	Ala	Val	Gly	Met	Leu	Cys	Met	Pro	Lys	Gly	Leu
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Ala	Phe	Lys	Thr	Gln	Ala	Asp	Pro	Arg	Glu	Pro	Gln	Phe	His	Ala	Phe
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Ile	Ile	Thr	Arg	Glu	Asp	Gly	Ser	Arg	Thr	Phe	Gly	Phe	Ala	Leu	Thr
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Leu	Tyr	His	Met	His	Asn	Ala	Glu	Tyr	Asp	Val	Leu	His	Ala	Pro	Pro
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Ala	Asp	Asp	Arg	Asp	Gln	Ser	Ser	Met	Glu	Asp	Gly	Glu	Asp	Thr	Pro
	_	-	•	245					250	-	-		-	255	
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		-	260		_			265	•	•			270	٠	
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	-	275			•		280					285			
Lys	Ala	Cvs	Arg	Ser	Val	Pro		Gln	Leu	His	Gln	Ala	Val	Thr	Ser
•	290	•	•			295	•				300				
Pro	Gln	Pro	Pro	Pro	Leu	Pro	Leu	Glu	Ser	Tyr	Ile	Tyr	Asn	Val	Leu
305					310					315		•			320
Tyr	Glu	Val	Pro	Leu	Pro	Pro	Pro	Glv	Arq	Ser	Leu	Lvs	Phe	Ser	Glv
- 2 -				325				,	330			-1-		335	,
Val	Tvr	Trp	Pro		Ile	Cvs	Gln	Ara		Ser	Thr	Asn	Glu	Leu	Pro
	•	•	340					345					350		
Leu	Phe	Asp		Pro	Val	Lvs	Glu		Phe	Glu	Leu	Leu		Val	Glu
		355				-,0	360					365	0. <i>1</i>		014
Asn	Val		Gln	Leu	Phe	Thr		Ala	Leu	Leu	Glu		Gln	Ile	Leu
	370					375	-,-				380				
Leu		Ser	Gln	His	Tvr		Δra	T.eu	Met	Thr		Δla	Glu	Thr	Tle
385	- , ~		V 1		390	· · · ·	••• y			395					400
	Ala	T.e.11	Met	Dhe		Dhe	Gln	Trn	Gln		Val	Tvr	Val	Pro	
				405	- 10		01		410			- 1 -	· · · ·	415	110
Len	Pro	Δla	Ser		T.em	Hie	Dhe	Len		Δla	Pro	Val	Pro	Tyr	ī.au
		ALU	420	DCG	Deu	1113	2 110	425	p	u		V41	430	- 7 -	neu
Mot	Gly	Lau		Sar) cn	Cl.	Tan		Nen) ra	cor.	TVC		Glu	T 011
ne c	Gry	435	HIS	261	ASII	GLY	440	мэр	мар	Arg	Ser	445	Deu	Giu	⊐∈ u
Dwa	C1 =		A 1 -	3	*	C		17-1	200	T1.	3		uio	Dha	T 3 -
FIO		GIU	ALG	ASII	ьeu		Fue	AGI	мэþ	115		MSII	urs	Phe	тте
C1	450	Dws	~1.·	N ===		455	G1 -	nh -	D==	N	460	T 0.15	~1	Dh.	11-1
	டeu	Pro	GIU	ASP		Pro	GID	Fue	PTO		гуѕ	ьeu	GIU	Phe	
465	C1	1103	C	G1	470	T	14	n 1 -	Db a	475	т1 -	Dwa	Dw-	C1	480
GIU	GIU	val	ser		тте	ren	мет	AIA		GTÅ	тте	P.I.O	PLO	Glu	GΙΆ
7 ~		***	~	485	01 · ·	~ -		.	490	+	v	7 ac-	T -	495	- 1
ASN	டeu	HIS	cys	ser	GIU	ser	ALA	ser	rÀz	ьeu	rys	Arg	ren	Arg	Ala

													-10		
		_	500	_		•	3	505	6 1	3	71.	71.	510	C 0 T	Dwa
Ser	Glu		vai	ser	Asp	Lys		ASD	GIÀ	ASI	116	525	GIA	Ser	PIQ
		515	<i>(</i> 100 mag)	~ 1		Leu	520	~1	Nan	C1	Th∽		7. T	Ara.	Lau
Leu		ser	Tyr	GIU	Leu	535	ьys	GIU	ASII	Gru	540	116	ALG	AL 9	Deu
71 -	530	7	Wa I		A	Thr	Gly	Val	Car	Leu		Lve	t.eu	Glu	Va 1
	АТА	Leu	vai	ьys	550	1111	GIY	val	261	555	GIU	цуз	ьец	GIU	560
545	C1	700	Dro	C0~		Asn	Tare) en	Len		Val	Gln	Cvs	Asn	
Arg	GIU	ASP	PIO	565	261	MSII	Буз	vab	570	Lys	vu	01	-,5	575	o.u
Glu	Glu	T.e.ii	Ara		Tur	Gln	Len	Asn		Gln	Ile	Ara	Glu		Phe
GIU	GIU	Deu	580	110	- 7 -	U1	200	585				5	590		
Δla	Asn	Ara		Thr	Gln	Met	Phe		Asp	Tvr	Glu	Val	Phe	Val	Ile
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Gln	Pro		Gln	Asp	Lys	Glu		Trp	Phe	Thr	Asn	Arg	Glu	Gln	Met
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Gln	Asn	Phe	Asp	Lys	Ala	Ser	Phe	Leu	Ser	Asp	Gln	Pro	Glu	Pro	Tyr
625			-	_	630					635					640
Leu	Pro	Phe	Leu	Ser	Arg	Phe	Leu	Glu	Thr	Gln	Met	Phe	Ala	Phe	Phe
				645					650					655	
Ile	Asp	Asn	Lys	Ile	Met	Cys	His	Asp	Asp	qzA	Asp	Lys	Asp	Pro	Val
			660					665					670		
Leu	Arg	Val	Phe	Asp	Ser	Arg		Asp	Lys	Ile	Arg		Leu	Asn	Val
		675					680					685			
Arg		Pro	Thr	Leu	Arg	Thr	Ser	Met	Tyr	Gln		Cys	Thr	Thr	Val
	690			_		695		_	_		700	•	-1 -		*** -
_	Glu	Ala	Glu	Lys		Ile	GIu	Leu	Arg		АТА	гĀг	ile	Asp	720
705	n1 -	-1-	***	D	710	Leu	T 011	7 ~~	Mot	715	Tla	Gl ₃	Gln	Gly	
Inr	ALA	TTE	HIS	PLO	HIS	LEU	rea	ASP	MEC	Lys	TIE	GTA	GIII	Gry	υys
				725					730						
Tur	Glu	Pro	Glv	725 Phe	Dhe		Lvs	ī.eu	730 Gln		Asp	Val		735	
Tyr	Glu	Pro			Phe	Pro	Lys				Asp	Val	Leu	735	
•			740	Phe		Pro		745	Gln	Ser			Leu 750	735 Cys	Thr
•			740	Phe				745	Gln	Ser			Leu 750	735 Cys	Thr
Gly	Pro	Ala 755	740 Ser	Phe Asn	Lys	Pro Trp	Thr 760	745 Lys	Gln Arg	Ser Asn	Ala	Pro 765	Leu 750 Ala	735 Cys Gln	Thr Trp
Gly	Pro	Ala 755	740 Ser	Phe Asn	Lys	Pro	Thr 760	745 Lys	Gln Arg	Ser Asn	Ala	Pro 765	Leu 750 Ala	735 Cys Gln	Thr Trp
Gly Arg	Pro Arg 770	Ala 755 Lys	740 Ser Asp	Phe Asn Arg	Lys Gln	Pro Trp Lys	Thr 760 Gln	745 Lys His	Gln Arg Thr	Ser Asn Glu	Ala His 780	Pro 765 Leu	Leu 750 Ala Arg	735 Cys Gln Leu	Thr Trp Asp
Gly Arg Asn 785	Pro Arg 770 Asp	Ala 755 Lys Gln	740 Ser Asp Arg	Phe Asn Arg Glu	Lys Gln Lys 790	Pro Trp Lys 775 Tyr	Thr 760 Gln Ile	745 Lys His Gln	Gln Arg Thr Glu	Ser Asn Glu Ala 795	Ala His 780 Arg	Pro 765 Leu Thr	Leu 750 Ala Arg Met	735 Cys Gln Leu Gly	Thr Trp Asp Ser 800
Gly Arg Asn 785	Pro Arg 770 Asp	Ala 755 Lys Gln	740 Ser Asp Arg	Phe Asn Arg Glu	Lys Gln Lys 790	Pro Trp Lys 775	Thr 760 Gln Ile	745 Lys His Gln	Gln Arg Thr Glu Leu	Ser Asn Glu Ala 795	Ala His 780 Arg	Pro 765 Leu Thr	Leu 750 Ala Arg Met	735 Cys Gln Leu Gly Ile	Thr Trp Asp Ser 800
Gly Arg Asn 785 Thr	Pro Arg 770 Asp	Ala 755 Lys Gln Arg	740 Ser Asp Arg Gln	Phe Asn Arg Glu Pro 805	Lys Gln Lys 790 Lys	Pro Trp Lys 775 Tyr	Thr 760 Gln Ile Ser	745 Lys His Gln Asn	Gln Arg Thr Glu Leu 810	Ser Asn Glu Ala 795 Ser	Ala His 780 Arg Pro	Pro 765 Leu Thr	Leu 750 Ala Arg Met Val	735 Cys Gln Leu Gly Ile 815	Thr Trp Asp Ser 800 Ala
Gly Arg Asn 785 Thr	Pro Arg 770 Asp	Ala 755 Lys Gln Arg	740 Ser Asp Arg Gln Trp	Phe Asn Arg Glu Pro 805	Lys Gln Lys 790 Lys	Pro Trp Lys 775 Tyr	Thr 760 Gln Ile Ser	745 Lys His Gln Asn	Gln Arg Thr Glu Leu 810	Ser Asn Glu Ala 795 Ser	Ala His 780 Arg Pro	Pro 765 Leu Thr	Leu 750 Ala Arg Met Val	735 Cys Gln Leu Gly Ile 815	Thr Trp Asp Ser 800 Ala
Gly Arg Asn 785 Thr	Pro Arg 770 Asp Ile	Ala 755 Lys Gln Arg	740 Ser Asp Arg Gln Trp 820	Phe Asn Arg Glu Pro 805 Lys	Lys Gln Lys 790 Lys Phe	Pro Trp Lys 775 Tyr Leu Val	Thr 760 Gln Ile Ser	745 Lys His Gln Asn Gly 825	Gln Arg Thr Glu Leu 810 Leu	Ser Asn Glu Ala 795 Ser Leu	Ala His 780 Arg Pro	Pro 765 Leu Thr Ser Glu	Leu 750 Ala Arg Met Val Cys 830	735 Cys Gln Leu Gly Ile 815 Arg	Thr Trp Asp Ser 800 Ala Asn
Gly Arg Asn 785 Thr	Pro Arg 770 Asp Ile	Ala 755 Lys Gln Arg Asn	740 Ser Asp Arg Gln Trp 820	Phe Asn Arg Glu Pro 805 Lys	Lys Gln Lys 790 Lys Phe	Pro Trp Lys 775 Tyr	Thr 760 Gln Ile Ser Glu Glu	745 Lys His Gln Asn Gly 825	Gln Arg Thr Glu Leu 810 Leu	Ser Asn Glu Ala 795 Ser Leu	Ala His 780 Arg Pro	Pro 765 Leu Thr Ser Glu Glu	Leu 750 Ala Arg Met Val Cys 830	735 Cys Gln Leu Gly Ile 815 Arg	Thr Trp Asp Ser 800 Ala Asn
Gly Arg Asn 785 Thr Gln Lys	Pro Arg 770 Asp Ile Thr	Ala 755 Lys Gln Arg Asn Lys 835	740 Ser Asp Arg Gln Trp 820 Arg	Phe Asn Arg Glu Pro 805 Lys Met	Lys Gln Lys 790 Lys Phe Leu	Pro Trp Lys 775 Tyr Leu Val	Thr 760 Gln Ile Ser Glu Glu 840	745 Lys His Gln Asn Gly 825 Lys	Gln Arg Thr Glu Leu 810 Leu Met	Ser Asn Glu Ala 795 Ser Leu Gly	Ala His 780 Arg Pro Lys	Pro 765 Leu Thr Ser Glu Glu 845	Leu 750 Ala Arg Met Val Cys 830 Ala	735 Cys Gln Leu Gly Ile 815 Arg	Thr Trp Asp Ser 800 Ala Asn Glu
Gly Arg Asn 785 Thr Gln Lys	Pro Arg 770 Asp Ile Thr Thr	Ala 755 Lys Gln Arg Asn Lys 835	740 Ser Asp Arg Gln Trp 820 Arg	Phe Asn Arg Glu Pro 805 Lys Met	Lys Gln Lys 790 Lys Phe Leu	Pro Trp Lys 775 Tyr Leu Val Val Asn	Thr 760 Gln Ile Ser Glu Glu 840	745 Lys His Gln Asn Gly 825 Lys	Gln Arg Thr Glu Leu 810 Leu Met	Ser Asn Glu Ala 795 Ser Leu Gly	Ala His 780 Arg Pro Lys Arg Glu	Pro 765 Leu Thr Ser Glu Glu 845	Leu 750 Ala Arg Met Val Cys 830 Ala	735 Cys Gln Leu Gly Ile 815 Arg	Thr Trp Asp Ser 800 Ala Asn Glu
Gly Arg Asn 785 Thr Gln Lys Leu	Pro Arg 770 Asp Ile Thr Thr Gly 850	Ala 755 Lys Gln Arg Asn Lys 835 His	740 Ser Asp Arg Gln Trp 820 Arg	Phe Asn Arg Glu Pro 805 Lys Met Glu	Lys Gln Lys 790 Lys Phe Leu Val	Pro Trp Lys 775 Tyr Leu Val Val Asn 855	Thr 760 Gln Ile Ser Glu Glu 840 Ile	745 Lys His Gln Asn Gly 825 Lys	Gln Arg Thr Glu Leu 810 Leu Met	Ser Asn Glu Ala 795 Ser Leu Gly Val	Ala His 780 Arg Pro Lys Arg Glu 860	Pro 765 Leu Thr Ser Glu Glu 845 Glu	Leu 750 Ala Arg Met Val Cys 830 Ala	735 Cys Gln Leu Gly Ile 815 Arg Val	Thr Trp Asp Ser 800 Ala Asn Glu Leu
Gly Arg Asn 785 Thr Gln Lys Leu Ile	Pro Arg 770 Asp Ile Thr Thr Gly 850	Ala 755 Lys Gln Arg Asn Lys 835 His	740 Ser Asp Arg Gln Trp 820 Arg	Phe Asn Arg Glu Pro 805 Lys Met Glu	Lys Gln Lys 790 Lys Phe Leu Val	Pro Trp Lys 775 Tyr Leu Val Val Asn	Thr 760 Gln Ile Ser Glu Glu 840 Ile	745 Lys His Gln Asn Gly 825 Lys	Gln Arg Thr Glu Leu 810 Leu Met	Ser Asn Glu Ala 795 Ser Leu Gly Val	Ala His 780 Arg Pro Lys Arg Glu 860	Pro 765 Leu Thr Ser Glu Glu 845 Glu	Leu 750 Ala Arg Met Val Cys 830 Ala	735 Cys Gln Leu Gly Ile 815 Arg Val	Thr Trp Asp Ser 800 Ala Asn Glu Leu Leu
Gly Arg Asn 785 Thr Gln Lys Leu Ile 865	Pro Arg 770 Asp Ile Thr Thr Gly 850 Ala	Ala 755 Lys Gln Arg Asn Lys 835 His	740 Ser Asp Arg Gln Trp 820 Arg Gly Leu	Phe Asn Arg Glu Pro 805 Lys Met Glu Cys	Lys Gln Lys 790 Lys Phe Leu Val Asp 870	Pro Trp Lys 775 Tyr Leu Val Val Asn 855 Leu	Thr 760 Gln Ile Ser Glu 840 Ile Leu	745 Lys His Gln Asn Gly 825 Lys Thr	Gln Arg Thr Glu Leu 810 Leu Met Gly Arg	Ser Asn Glu Ala 795 Ser Leu Gly Val Ile 875	Ala His 780 Arg Pro Lys Arg Glu 860 Trp	Pro 765 Leu Thr Ser Glu 845 Glu Ser	Leu 750 Ala Arg Met Val Cys 830 Ala Asn	735 Cys Gln Leu Gly Ile 815 Arg Val Thr	Thr Trp Asp Ser 800 Ala Asn Glu Leu Leu 880
Gly Arg Asn 785 Thr Gln Lys Leu Ile 865	Pro Arg 770 Asp Ile Thr Thr Gly 850 Ala	Ala 755 Lys Gln Arg Asn Lys 835 His	740 Ser Asp Arg Gln Trp 820 Arg Gly Leu	Phe Asn Arg Glu Pro 805 Lys Met Glu Cys Gly	Lys Gln Lys 790 Lys Phe Leu Val Asp 870	Pro Trp Lys 775 Tyr Leu Val Val Asn 855	Thr 760 Gln Ile Ser Glu 840 Ile Leu	745 Lys His Gln Asn Gly 825 Lys Thr	Gln Arg Thr Glu Leu 810 Leu Met Gly Arg	Ser Asn Glu Ala 795 Ser Leu Gly Val Ile 875	Ala His 780 Arg Pro Lys Arg Glu 860 Trp	Pro 765 Leu Thr Ser Glu 845 Glu Ser	Leu 750 Ala Arg Met Val Cys 830 Ala Asn	735 Cys Gln Leu Gly Ile 815 Arg Val Thr	Thr Trp Asp Ser 800 Ala Asn Glu Leu Leu 880
Gly Arg Asn 785 Thr Gln Lys Leu Ile 865 Gln	Arg 770 Asp Ile Thr Thr Gly 850 Ala	Ala 755 Lys Gln Arg Asn Lys 835 His Ser	740 Ser Asp Arg Gln Trp 820 Arg Gly Leu Gln	Phe Asn Arg Glu Pro 805 Lys Met Glu Cys Gly 885	Lys Gln Lys 790 Lys Phe Leu Val Asp 870 Lys	Pro Trp Lys 775 Tyr Leu Val Val Asn 855 Leu Ser	Thr 760 Gln Ile Ser Glu 840 Ile Leu Ala	745 Lys His Gln Asn Gly 825 Lys Thr Glu Leu	Gln Arg Thr Glu Leu 810 Leu Met Gly Arg Trp 890	Ser Asn Glu Ala 795 Ser Leu Gly Val Ile 875 Ser	Ala His 780 Arg Pro Lys Arg Glu 860 Trp	Pro 765 Leu Thr Ser Glu 845 Glu Ser Leu	Leu 750 Ala Arg Met Val Cys 830 Ala Asn His	735 Cys Gln Leu Gly Ile 815 Arg Val Thr Gly His 895	Thr Trp Asp Ser 800 Ala Asn Glu Leu 880 Tyr
Gly Arg Asn 785 Thr Gln Lys Leu Ile 865 Gln	Arg 770 Asp Ile Thr Thr Gly 850 Ala	Ala 755 Lys Gln Arg Asn Lys 835 His Ser	740 Ser Asp Arg Gln Trp 820 Arg Gly Leu Gln	Phe Asn Arg Glu Pro 805 Lys Met Glu Cys Gly 885	Lys Gln Lys 790 Lys Phe Leu Val Asp 870 Lys	Pro Trp Lys 775 Tyr Leu Val Val Asn 855 Leu	Thr 760 Gln Ile Ser Glu 840 Ile Leu Ala	745 Lys His Gln Asn Gly 825 Lys Thr Glu Leu	Gln Arg Thr Glu Leu 810 Leu Met Gly Arg Trp 890	Ser Asn Glu Ala 795 Ser Leu Gly Val Ile 875 Ser	Ala His 780 Arg Pro Lys Arg Glu 860 Trp	Pro 765 Leu Thr Ser Glu 845 Glu Ser Leu	Leu 750 Ala Arg Met Val Cys 830 Ala Asn His	735 Cys Gln Leu Gly Ile 815 Arg Val Thr Gly His 895	Thr Trp Asp Ser 800 Ala Asn Glu Leu 880 Tyr
Gly Arg Asn 785 Thr Gln Lys Leu Ile 865 Gln Gln	Pro Arg 770 Asp Ile Thr Thr Gly Ala Val	Ala 755 Lys Gln Arg Asn Lys 835 His Ser Lys	740 Ser Asp Gln Trp 820 Arg Gly Leu Gln Arg	Phe Asn Arg Glu Pro 805 Lys Met Glu Cys Gly 885 Gln	Lys Gln Lys 790 Lys Phe Leu Val Asp 870 Lys	Pro Trp Lys 775 Tyr Leu Val Val Asn 855 Leu Ser	Thr 760 Gln Ile Ser Glu 840 Ile Leu Ala	745 Lys His Gln Asn Gly 825 Lys Thr Glu Leu Thr 905	Gln Arg Thr Glu Leu 810 Leu Met Gly Arg Trp 890 Ser	Ser Asn Glu Ala 795 Ser Leu Gly Val Ile 875 Ser Gly	Ala His 780 Arg Pro Lys Arg Glu 860 Trp His Ser	Pro 765 Leu Thr Ser Glu 845 Glu Ser Leu	Leu 750 Ala Arg Met Val Cys 830 Ala Asn His Leu Ser 910	735 Cys Gln Leu Gly Ile 815 Arg Val Thr Gly His 895 Thr	Thr Trp Asp Ser 800 Ala Asn Glu Leu 880 Tyr
Gly Arg Asn 785 Thr Gln Lys Leu Ile 865 Gln Gln	Pro Arg 770 Asp Ile Thr Thr Gly 850 Ala Val Asp	Ala 755 Lys Gln Arg Asn Lys 835 His Ser Lys Asn	740 Ser Asp Gln Trp 820 Arg Gly Leu Gln Arg 900 Leu	Phe Asn Arg Glu Pro 805 Lys Met Glu Cys Gly 885 Gln Asp	Lys Gln Lys 790 Lys Phe Leu Val Asp 870 Lys	Pro Trp Lys 775 Tyr Leu Val Val Asn 855 Leu Ser Lys	Thr 760 Gln Ile Ser Glu 840 Ile Leu Ala Leu Arg 920	745 Lys His Gln Asn Gly 825 Lys Thr Glu Leu Thr 905 Arg	Gln Arg Thr Glu Leu 810 Leu Met Gly Arg Trp 890 Ser Lys	Ser Asn Glu Ala 795 Ser Leu Gly Val Ile 875 Ser Gly Ser	Ala His 780 Arg Pro Lys Arg Glu 860 Trp His Ser	Pro 765 Leu Thr Ser Glu 845 Glu Ser Leu Leu	Leu 750 Ala Arg Met Val Cys 830 Ala Asn His Leu Ser 910 Ser	735 Cys Gln Leu Gly Ile 815 Arg Val Thr Gly His 895 Thr	Thr Trp Asp Ser 800 Ala Asn Glu Leu Leu 880 Tyr Ser Leu

930	935		940	
Asn Ile Gly Glu				a Ala Tro Val
945	950		955	960
Arg Leu Ser Met		Leu Leu Sei	r Arg His Le	u Lys Gln Leu
	965	970		975
Leu Ser Asp His		Lvs Lvs Let	ı Tyr Lys Ar	Tyr Ala Phe
980		985		990
Leu Arg Cys Asp	Asp Glu Lvs		e Leu Tyr Hi	s Leu Leu Ser
995		1000	10	
Phe Asn Ala Val	Asp Tvr Phe		r Asn Val Ph	e Thr Thr Ile
1010	101		1020	
Leu Ile Pro Tyr	His Ile Leu	Ile Val Pro	Ser Lys Ly	s Leu Gly Gly
1025	1030		1035	1040
Ser Met Phe Thr	Ala Asn Pro	Trp Ile Cys	s Ile Ser Gl	y Glu Leu Gly
	1045	109		1055
Glu Thr Gln Ile	Met Gln Ile	Pro Arg Asi	ı Val Leu Gl	u Met Thr Phe
1060		1065		1070
Glu Cys Gln Asn	Leu Gly Lys	Leu Thr Thi	r Val Gln Il	e Gly His Asp
1075		1080	10	
Asn Ser Gly Leu	Tyr Ala Lys	Trp Leu Val	l Glu Tyr Va	l Met Val Arg
1090	109		1100	
Asn Glu Ile Thr	=	Tyr Lys Phe		
1105	1110	_	1115	1120
Gly Lys Gly Met				
	1125	11:		1135
Leu Leu Thr Ser		Val Asp Giv	arg Pro Cy.	s Arg Thr Pro
2 2 4 4 0		2245		1150
1140		1145	r Ara Leu Va	1150 Thr Ile Ser
Pro Leu Gln Gln		Val Ile Arg		l Thr Ile Ser
Pro Leu Gln Gln 1155	Ser Pro Ser	Val Ile Arg	11	l Thr Ile Ser
Pro Leu Gln Gln 1155 Pro Asn Asn Lys	Ser Pro Ser	Val Ile Arg 1160 Asn Thr Gly	Gln Ile Gl	l Thr Ile Ser
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170	Ser Pro Ser Pro Lys Leu 117	Val Ile Arg 1160 Asn Thr Gly	11. Gln Ile Gl: 1180	l Thr Ile Ser 65 n Glu Ser Ile
Pro Leu Gln Gln 1155 Pro Asn Asn Lys	Ser Pro Ser Pro Lys Leu 117	Val Ile Arg 1160 Asn Thr Gly	11. Gln Ile Gl: 1180	l Thr Ile Ser 65 n Glu Ser Ile
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185	Ser Pro Ser Pro Lys Leu 117 Asn Gly Ile 1190	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His	11. Y Gln Ile Gl: 1180 s Phe His Ly: 1195	1 Thr Ile Ser 65 n Glu Ser Ile s Pro Glu Lys 1200
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser	Ser Pro Ser Pro Lys Leu 117 Asn Gly Ile 1190	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His	Gln Ile Gli 1180 S Phe His Ly 1195 S Gly Glu Cy	1 Thr Ile Ser 65 n Glu Ser Ile s Pro Glu Lys 1200
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser	Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His Leu Leu Cys	Gln Ile Gli 1180 s Phe His Ly: 1195 s Gly Glu Cy:	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Pro Glu Lys 1200 I Gly Leu Val 1215
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220	Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His Leu Leu Cys 122 Gln His Gly 1225	Gln Ile Gla 1180 s Phe His Ly 1195 s Gly Glu Cy 10	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Pro Glu Lys 1200 I Gly Leu Val 1215 I Pro Arg Leu 1230
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu	Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His Leu Leu Cys 122 Gln His Gly 1225	Gln Ile Gla 1180 s Phe His Ly 1195 s Gly Glu Cy 10	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Pro Glu Lys 1200 I Gly Leu Val 1215 I Pro Arg Leu 1230
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220 Phe Lys Asn Val 1235	Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His Leu Leu Cys 122 Gln His Gly 1225 Asp Phe Leu 1240	Gln Ile Gla 1180 s Phe His Ly 1195 s Gly Glu Cy 10 y Phe Lys Sec 1 Glu Lys Ala 12	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Pro Glu Lys 1200 I Gly Leu Val 1215 I Pro Arg Leu 1230 I Gln Thr Tyr 45
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220 Phe Lys Asn Val	Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His Leu Leu Cys 122 Gln His Gly 1225 Asp Phe Leu 1240	11:0 7 Gln Ile Gl: 11:80 8 Phe His Ly: 11:95 8 Gly Glu Cy: 10 7 Phe Lys Se: 1 Glu Lys Al: 12: 1 Pro Glu Gl:	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Pro Glu Lys 1200 I Gly Leu Val 1215 I Pro Arg Leu 1230 I Gln Thr Tyr 45
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220 Phe Lys Asn Val 1235 Tyr Glu Thr Leu 1250	Ser Pro Ser Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe Phe Ile Trp Glu Lys Asn 125	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His Leu Leu Cys 12: Gln His Gly 1225 Asp Phe Leu 1240 Glu Val Val	7 Gln Ile Gl: 1180 5 Phe His Ly: 1195 5 Gly Glu Cy: 10 7 Phe Lys Se: 1 Glu Lys Al: 1260	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Pro Glu Lys 1200 I Gly Leu Val 1215 I Pro Arg Leu 1230 I Gln Thr Tyr As
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220 Phe Lys Asn Val 1235 Tyr Glu Thr Leu 1250 Thr Arg Ala Arg	Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe Phe Ile Trp Glu Lys Asn 125 Asn Phe Cys	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His Leu Leu Cys 12: Gln His Gly 1225 Asp Phe Leu 1240 Glu Val Val	11:0 7 Gln Ile Gl: 11:80 8 Phe His Ly: 11:95 8 Gly Glu Cy: 10 7 Phe Lys Se: 1 Glu Lys Al: 12:0 1 Pro Glu Gl: 12:60 1 Thr Ala Ile	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Pro Glu Lys 1200 I Gly Leu Val 1215 I Pro Arg Leu 1230 I Gln Thr Tyr I Asn Trp His I Asn Asn Thr
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220 Phe Lys Asn Val 1235 Tyr Glu Thr Leu 1250 Thr Arg Ala Arg 1265	Ser Pro Ser Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe Phe Ile Trp Glu Lys Asn 125 Asn Phe Cys 1270	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His Leu Leu Cys 1225 Asp Phe Leu 1240 Glu Val Val 5 Arg Phe Val	11:0 Gln Ile Gl: 1180 S Phe His Ly: 1195 S Gly Glu Cy: 10 Y Phe Lys Se: 1 Glu Lys Al: 1260 L Thr Ala Ile 1275	I Thr Ile Ser I Glu Ser Ile I Glu Ser Ile I Pro Glu Lys 1215 I Pro Arg Leu 1230 I Gln Thr Tyr I Asn Trp His I Asn Asn Thr 1280
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220 Phe Lys Asn Val 1235 Tyr Glu Thr Leu 1250 Thr Arg Ala Arg 1265 Pro Arg Asn Ile	Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe Phe Ile Trp Glu Lys Asn 125 Asn Phe Cys 1270 Gly Lys Asp	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His Leu Leu Cys 1225 Gln His Gly 1225 Asp Phe Leu 1240 Glu Val Val 5 Arg Phe Val	7 Gln Ile Gli 1180 S Phe His Ly 1195 S Gly Glu Cy 10 7 Phe Lys Se 1 Glu Lys Al 126 1 Pro Glu Gli 1260 1 Thr Ala Ile 1275 S Gln Met Le	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Pro Glu Lys 1215 I Pro Arg Leu 1230 I Gln Thr Tyr I Asn Trp His I Asn Asn Thr 1280 I Val Cys Leu
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220 Phe Lys Asn Val 1235 Tyr Glu Thr Leu 1250 Thr Arg Ala Arg 1265 Pro Arg Asn Ile	Ser Pro Ser Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe Phe Ile Trp Glu Lys Asn 125 Asn Phe Cys 1270 Gly Lys Asp 1285	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His Leu Leu Cys 1225 Asp Phe Leu 1240 Glu Val Val 5 Arg Phe Val Gly Lys Phe	11: 7 Gln Ile Gl: 1180 s Phe His Ly: 1195 s Gly Glu Cy: 10 7 Phe Lys Se: 1 Glu Lys Al: 12: 1 Pro Glu Gl: 1260 l Thr Ala Ile 1275 e Gln Met Les	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Pro Glu Lys 1215 I Pro Arg Leu 1230 I Gln Thr Tyr I Asn Trp His I Asn Asn Thr 1280 I Val Cys Leu 1295
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220 Phe Lys Asn Val 1235 Tyr Glu Thr Leu 1250 Thr Arg Ala Arg 1265 Pro Arg Asn Ile Gly Ala Arg Asp	Ser Pro Ser Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe Phe Ile Trp Glu Lys Asn 125 Asn Phe Cys 1270 Gly Lys Asp 1285 His Leu Leu	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His Leu Leu Cys 1225 Asp Phe Leu 1240 Glu Val Val 5 Arg Phe Val Gly Lys Phe 129 His His Try	11: 7 Gln Ile Gl: 1180 s Phe His Ly: 1195 s Gly Glu Cy: 10 7 Phe Lys Se: 1 Glu Lys Al: 12: 1 Pro Glu Gl: 1260 l Thr Ala Ile 1275 e Gln Met Les	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Pro Glu Lys 1215 I Pro Arg Leu 1230 I Gln Thr Tyr I Asn Trp His I Asn Asn Thr 1280 I Val Cys Leu 1295 I Leu Ala Asp
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220 Phe Lys Asn Val 1235 Tyr Glu Thr Leu 1250 Thr Arg Ala Arg 1265 Pro Arg Asn Ile Gly Ala Arg Asp 1300	Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe Phe Ile Trp Glu Lys Asn 125 Asn Phe Cys 1270 Gly Lys Asp 1285 His Leu Leu	Val Ile Arg 1160 Asn Thr Gly Val Lys His Leu Leu Cys 1225 Asp Phe Leu 1240 Glu Val Val 5 Arg Phe Val Gly Lys Phe 129 His His Try 1305	Glu Lys Al. 1260 1 Pro Glu Glu Cy. 1 Glu Lys Al. 1 1260 1 Thr Ala Il. 1 1275 2 Gln Met Let	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Pro Glu Lys 1200 I Gly Leu Val 1215 I Pro Arg Leu 1230 I Gln Thr Tyr 45 I Asn Trp His I Asn Asn Thr 1280 I Val Cys Leu 1295 I Leu Ala Asp 1310
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220 Phe Lys Asn Val 1235 Tyr Glu Thr Leu 1250 Thr Arg Ala Arg 1265 Pro Arg Asn Ile Gly Ala Arg Asp 1300 Cys Pro Ile Thr	Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe Phe Ile Trp Glu Lys Asn 125 Asn Phe Cys 1270 Gly Lys Asp 1285 His Leu Leu	Val Ile Arg 1160 Asn Thr Gly 5 Val Lys His Leu Leu Cys 1225 Asp Phe Leu 1240 Glu Val Val 5 Arg Phe Val Gly Lys Phe 129 His His Try 1305 Tyr Glu Asp	Glu Lys Al. 1260 1 Glu Lys Al. 1260 1 Thr Ala Ile 1275 2 Gln Met Lee 2 Val Ala Lee 2 Val Ala Lee	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Pro Glu Lys 1215 I Pro Arg Leu 1230 I Gln Thr Tyr I Asn Trp His I Asn Asn Thr 1280 I Val Cys Leu 1295 I Leu Ala Asp 1310 I Ile Lys Asp
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220 Phe Lys Asn Val 1235 Tyr Glu Thr Leu 1250 Thr Arg Ala Arg 1265 Pro Arg Asn Ile Gly Ala Arg Asp 1300 Cys Pro Ile Thr	Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe Phe Ile Trp Glu Lys Asn 125 Asn Phe Cys 1270 Gly Lys Asp 1285 His Leu Leu Ala His Met	Val Ile Arg 1160 Asn Thr Gly S Val Lys His Leu Leu Cys 123 Gln His Gly 1225 Asp Phe Leu 1240 Glu Val Val S Arg Phe Val Gly Lys Phe 129 His His Try 1305 Tyr Glu Asy	y Gln Ile Gli 1180 s Phe His Lys 1195 s Gly Glu Cys 10 y Phe Lys Sei l Glu Lys Ala 1260 l Thr Ala Ile 1275 e Gln Met Les 0 Ile Ala Les 1 Val Ala Les	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Clu Ser Ile I Lys I 200 I Clu Ser I Leu I Lys I Clu Ser I Leu I Leu
Pro Leu Gln Gln 1155 Pro Asn Asn Lys 1170 Gly Glu Ala Val 1185 Glu Arg Gly Ser Ser Ala Leu Glu 1220 Phe Lys Asn Val 1235 Tyr Glu Thr Leu 1250 Thr Arg Ala Arg 1265 Pro Arg Asn Ile Gly Ala Arg Asp 1300 Cys Pro Ile Thr 1315 His Thr Leu Val	Ser Pro Ser Pro Lys Leu 117 Asn Gly Ile 1190 Leu Thr Leu 1205 Gln Ala Phe Phe Ile Trp Glu Lys Asn 125 Asn Phe Cys 1270 Gly Lys Asp 1285 His Leu Leu Ala His Met	Val Ile Arg 1160 Asn Thr Gly S Val Lys His Leu Leu Cys 1225 Asp Phe Leu 1240 Glu Val Val S Arg Phe Val Gly Lys Phe 129 His His Try 1305 Tyr Glu Asp 1320 Ile Arg Val	Glu Lys Ala 1275 Glu Lys Ala 1260 Thr Ala Ilc 1275 Glu Met Lec Val Ala Lec Lys Ala Lec Lys Ala 1260 Lys Ala 1275 Lys Ala 1260 Lys Ala 1275	Thr Ile Ser I Thr Ile Ser I Glu Ser Ile I Clu Ser Ile I Lys I 200 I Clu Ser I Leu I Lys I Clu Ser I Leu I Leu
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Thr	210	F0×	Ser	17-1	Dro	215	Dro	n cn	т1 о	Thr		Thr	Lou	λ 1 ¬	Lou
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Arg	Asp	TTE	Glu		Thr	GIA	TTE	Ата		ніз	Ата	ren	ser	-	TIE
Lace	T122	Clv	Asp	325	Th =	Thr	Sar	Glu	330	V=1	Lan	Dhe	Δla	335	ጥህም
гуş	TYL	GIY	340	1111	1111	1111	Jer	345	Gry	val	Dea	FILE	350	1111	1 Y L
Ser	Ala	Leu	Ile	Glv	Glu	Ser	Gln		Glv	Glv	Gln	His		Thr	Arg
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Val	Tyr	Ala	Ser	Ala	Thr	GIY	Thr		GLu	Pro	Arg	Asn		He	Tyr
Wat	C ~ ~	7 200	420	c1	т1.	Tren	C111	425	C1.	The	Dro	Dho	430) cn	Dho
met	ser	435	Leu	GIY	He	irp	_	GIU	_		PIO	445	AIG	ASII	Pile
Glu	Glu		Leu	Hie	د ۱ ۵	Tle					Val		Ala	Met	Glu
014	450	FILE	Deu	1113	nia	455	GIU	Lys	nr 9	OI,	460	GIY	nru	1100	OI u
Ile		Ala	Met	Asp	Met		Val	Ser	Glv	Met		Ile	Ala	Ara	Gln
465					470	-, -			1	475	- , -			ر د د	480
	Ser	Phe	Ser	Gly		Thr	Phe	Arg	Ile		Glu	Ile	Pro	Leu	
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Pro	Ala	Phe	Glu	Cys	Val	Tyr	Asn	Arg	Ala	Ala	Leu	Leu	Trp	Ala	Glu
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Ala	Leu	Asn	۷al	Phe	Gln	Gln	Ala	Ala	Asp	Trp	Ile	Gly	Leu	Glu	Ser

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ьуз 785	GIN	Arg	Phe	Met	790	GIÀ	GIU	гув	reu	795	Ата	116	116	Ser	800
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His	Gly	Asp	Arg		Ala	Thr	Glu	Ser		Asp	Leu	Ser	Lys		Asn
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Phe	Glu	Asn	Lys	Tyr	GIY	Thr	Arg		Leu	His	Cys	val		Inr	Thr
T7 -	T	0.5~	900	mb	C1	7	T	905	Dwa	t7~ 1	Dra	C1~	910	Τι.~	Dro
тте	ьeu		Gln	inr	GIU	ASI	ւys 920	AGT	Pro	vdI	PEO	925	GTÅ	TAT	PIO
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GIY	930	V CL _			1.16	935	9	٦٠٥٢		- 73	940	~-1	~~ •		
Va]		Ile	Gly	Glv	Ara		Ser	Ara	Asn	Gly	-	Leu	Asp	Val	Glu
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945			_		950	_		_		955		_		.	960
Lys	Asp	Cys	Ser	11e 965	Thr	Lys	Phe	Leu	970	Arg	He	Leu	GIY	975	GIU
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Asn Val Pro Val Lys Ser His Gln Gly Leu Glu Asp Glu Arg Val Asn
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Phe Ile His Leu Ile Leu Glu Ala Leu Val Asp Gly Pro Arg Met Gln
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Ala Ser Ala His Val Thr Arg Pro Ser Lys Arg Pro Ser Lys Ile Gly
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Phe Asp Glu Val Phe Val Ile Ser Leu Ala Arg Arg Pro Asp Arg Arg
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Glu Arg Met Leu Ala Ser Leu Trp Glu Met Glu Ile Ser Gly Arg Val
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Val Asp Ala Val Asp Gly Trp Met Leu Asn Ser Ser Ala Ile Arg Asn
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Leu Gly Val Asp Leu Leu Pro Gly Tyr Gln Asp Pro Tyr Ser Gly Arg
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Thr Leu Thr Lys Gly Glu Val Gly Cys Phe Leu Ser His Tyr Ser Ile
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Trp Glu Glu Val Val Ala Arg Gly Leu Ala Arg Val Leu Val Phe Glu
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Asp Asp Val Arg Phe Glu Ser Asn Phe Arg Gly Arg Leu Glu Arg Leu
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Met Glu Asp Val Glu Ala Glu Lys Leu Ser Trp Asp Leu Ile Tyr Leu
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Gly Arg Lys Gln Val Asn Pro Glu Lys Glu Thr Ala Val Glu Gly Leu
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Pro Gly Leu Val Val Ala Gly Tyr Ser Tyr Trp Thr Leu Ala Tyr Ala
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Leu Arg Leu Ala Gly Ala Arg Lys Leu Leu Ala Ser Gln Pro Leu Arg
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Arg Met Leu Pro Val Asp Glu Phe Leu Pro Ile Met Phe Asp Gln His
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Trp Ser Pro Asp Gly Arg His Ile Leu Asn Thr Thr Glu Phe His Leu
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                            40
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Arg Ile Thr Val Trp Ser Leu Cys Thr Lys Ser Val Ser Tyr Ile Lys
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Tyr Pro Lys Ala Cys Leu Gln Gly Ile Thr Phe Thr Arg Asp Gly Arg
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Tyr Met Ala Leu Ala Glu Arg Arg Asp Cys Lys Asp Tyr Val Ser Ile
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Phe Val Cys Ser Asp Trp Gln Leu Leu Arg His Phe Asp Thr Asp Thr
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Gln Asp Leu Thr Gly Ile Glu Trp Ala Pro Asn Gly Cys Val Leu Ala
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Val Trp Asp Thr Cys Leu Glu Tyr Lys Ile Leu Leu Tyr Ser Leu Asp
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Gly Arg Leu Leu Ser Thr Tyr Ser Ala Xaa Arg Val Val Xaa Leu Gly
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Ile Lys Ser Val Ala Trp Ser Pro Ser Ser Gln Phe Leu Ala Val Gly
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Ser Tyr Asp Gly Lys Val Arg Ile Leu Asn His Val Thr Trp Lys Met
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Lys Ser Asp Trp Gln Thr Arg Thr Gly Gln Pro Cys Ser Cys Met Ile
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Gln Glu Leu Ala Ser Glu Arg Glu Ser Val Ala Glu Ala Gly Gly Ser
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Ala Arg Gln Lys Val Arg Gly Leu Val Leu Arg Arg Gly Lys Arg Gln
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Ser Glu Ser Leu His Ala Pro Gly Leu His Gly Arg Ala Arg Ala Ser
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480
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Arg Asn Leu Gln Lys Tyr Val Ser Arg Thr Ser Val Val Phe Val Ser
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Ile Ser Phe Ile Val Leu Met Ile Ile Ser Leu Ala Trp Leu Val Phe
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Tyr Tyr Ile Gln Arg Phe Arg Tyr Ala Asn Ala Arg Asp Arg Asn Gln
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Arg Arg Leu Gly Asp Ala Ala Lys Lys Ala Ile Ser Lys Leu Gln Ile
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                            120
Arg Thr Ile Lys Lys Gly Asp Lys Glu Thr Glu Ser Asp Phe Asp Asn
                                            140
    130
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Cys Ala Val Cys Ile Glu Gly Tyr Lys Pro Asn Asp Val Val Arg Ile
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                    150
Leu Pro Cys Arg His Leu Phe His Lys Ser Cys Val Asp Pro Trp Leu
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                                                       175
                165
Leu Asp His Arg Thr Cys Pro Met Cys Lys Met Asn Ile Leu Lys Ala
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                                                    190
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Leu Gly Ile Pro Pro Asn Ala Asp Cys Met Asp Asp Phe Ala Thr Asp
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Phe Glu
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gcagaaaaga tggaaaaaag gacatgtgca ctctgcccca aagatgtcga atataatgtc
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egggatgget tegacatete eggcaacece tggatetgtg accagaacet gagegacete
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Ala Asp Thr Val His Leu Ala Val Glu Phe Phe Asn Leu Thr His Leu
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Pro Ala Asn Leu Leu Gln Gly Ala Ser Lys Leu Gln Glu Leu His Leu
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Pro Gln Leu Arg Val Leu Asp Leu Thr Arg Asn Ala Leu Thr Gly Leu
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Pro Pro Gly Leu Phe Gln Ala Ser Ala Thr Leu Asp Thr Leu Val Leu
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                              105
Lys Glu Asn Gln Leu Glu Val Leu Glu Val Ser Trp Leu His Gly Leu
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                                               125
       115
Lys Ala Leu Gly His Leu Asp Leu Ser Gly Asn Arg Leu Arg Lys Leu
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                       135
Pro Pro Gly Leu Leu Ala Asn Phe Thr Leu Leu Arg Thr Leu Asp Leu
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Gly Glu Asn Gln Leu Glu Thr Leu Pro Pro Asp Leu Leu Arg Gly Pro
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Leu Gln Leu Glu Arg Leu His Leu Glu Gly Asn Lys Leu Gln Val Leu
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                               185
           180
Gly Lys Asp Leu Leu Pro Gln Pro Asp Leu Arg Tyr Leu Phe Leu
                           200
                                               205
Ser Gly Asn Lys Leu Ala Arg Val Ala Ala Gly Ala Phe Gln Gly Leu
                      215
                                          220
  210
Arg Gln Leu Asp Met Leu Asp Leu Ser Asn Asn Ser Leu Ala Ser Val
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                                       235
Pro Glu Gly Leu Trp Ala Ser Leu Gly Gln Pro Asn Trp Asp Met Arg
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250
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Asp Gly Phe Asp Ile Ser Gly Asn Pro Trp Ile Cys Asp Gln Asn Leu
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Ser Asp Leu Tyr Arg Trp Leu Gln Ala Gln Lys Asp Lys Met Phe Ser
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Gln Asn Asp Thr Arg Cys Ala Gly Pro Glu Ala Val Lys Gly Gln Thr
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Thr Glu Glu Met Ser Arg Val Leu Met Gly Gly Thr Leu Gly Arg Ser
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Gly Met Ser Pro Pro Pro Cys Lys Leu Pro Cys Leu Ser Pro Pro Thr
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Tyr Thr Thr Phe Gln Ala Thr Pro Thr Leu Ile Pro Thr Glu Thr Ala
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                                   90
Ala Leu Tyr Pro Ser Ser Ala Leu Leu Pro Ala Ala Arg Val Pro Ala.
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Ala Pro Thr Pro Val Ala Tyr Tyr Pro Gly Pro Ala Thr Gln Leu Tyr

120

115

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Ser His Val Arg Arg Asn Lys Arg Asn Met Asn Leu Asp Gly Ala Ala
       35
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Ser Ile Val Pro Leu Leu Leu Leu Met Asn Lys Ala Ser Pro Glu
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240
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PCT/US00/08621 WO 00/58473

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Lys Gly Glu Glu Pro Asp Ile Ala Val Pro Lys Phe Lys Gln Arg Lys
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Gly Glu Ser Asp Gly Ala Tyr Ile His Arg Met Gln Gln Glu Ala Gln
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His Val Leu Phe Leu Ser Lys Asn Gln Ala Ile Arg Gln Pro Glu Val
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His Arg Leu Ser Leu Phe Val Leu Met Asp Glu Ser Glu Ser Gln Thr
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His Leu Phe Cys Ser Ser Ser Leu Gly Arg Glu His Arg Lys Met Gly
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Phe Ala Tyr Val Cys Val Trp Gly Gly Leu Phe Phe Leu Cys Phe Ser
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Val Leu Ala Ile Ala Cys Gly Arg Ala Gly Thr Trp Asp Leu Ala Arg
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2361

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Leu Pro Thr Ser Gln Glu Leu Arg Pro Ala Ala Gln Pro Lys Gln Gln
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                               25
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Arg Leu Pro Pro Phe Thr His Leu Pro Ser Val Pro Gly Pro Pro Ser
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2365

Leu Pro Tyr Asn His Gln His Glu Tyr Phe Phe Leu Ile Gly Pro Pro

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Arg Phe Phe Ile Thr Tyr Ile Pro Phe Tyr Gly Ile Leu Gly Ala Leu
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                    310
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Leu Phe Leu Asn Phe Ile Arg Phe Leu Glu Ser His Trp Phe Val Trp
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                325
Val Thr Gln Met Asn His Ile Val Met Glu Ile Asp Gln Glu Ala Tyr
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           340
Arg Asp Trp Phe Ser Ser Gln Leu Thr Ala Thr Cys Asn Val Glu Gln
                                                365
       355
                            360
Ser Phe Phe Asn Asp Trp Phe Ser Gly His Leu Asn Phe Gln Ile Glu
                                            380
                        375
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His His Leu Phe Pro Thr Met Pro Arg His Asn Leu His Lys Ile Ala
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                    390
Pro Leu Val Lys Ser Leu Cys Ala Lys His Gly Ile Glu Tyr Gln Glu
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Lys Pro Leu Leu Arg Ala Leu Leu Asp Ile Ile Arg Ser Leu Lys Lys
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Ala Pro Ala Ala Gly Thr Met Gly Ala Ala His Ser Ala Ser Glu Glu
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Val Arg Glu Leu Glu Gly Lys Thr Gly Phe Ser Ser Asp Gln Ile Glu
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Gln Leu His Arg Arg Phe Lys Gln Leu Ser Gly Asp Gln Pro Thr Ile
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Arg Lys Glu Asn Phe Asn Asn Val Pro Asp Leu Glu Leu Asn Pro Ile
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Arg Ser Lys Ile Val Arg Ala Phe Phe Asp Asn Arg Asn Leu Arg Lys
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                             105
                                                 110
Gly Pro Ser Gly Leu Ala Asp Glu Ile Asn Phe Glu Asp Phe Leu Thr
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                           120
                                              125
Ile Met Ser Tyr Phe Arg Pro Ile Asp Thr Thr Met Asp Glu Glu Gln
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                       135
                                          140
Val Glu Leu Ser Arg Lys Glu Lys Leu Arg Phe Leu Phe His Met Tyr
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                                      155
Asp Ser Asp Ser Asp Gly Arg Ile Thr Leu Glu Glu Tyr Arg Asn Val
                                 170
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Lys Trp Ser Arg Ser Cys Cys Arg Glu Thr Leu Thr Ser Arg Arg Ser
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Pro Leu Ala Pro Ser Pro Thr Gly Pro
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120
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Ile Ala Ser Trp Lys Gly Leu Val Arg Phe Leu Asn Ser Leu Gly Thr
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Ile Phe Ser Phe Ile Ser Lys Asp Val Val Ser Lys Leu Arg Ile Met
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Glu Arg Leu Arg Gly Gly Pro Gln Ser Glu His Tyr Arg Ser Leu Gln
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Ala Met Val Ala His Glu Leu Ser Asn Arg Leu Val Asp Leu Glu Gly
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Arg Ser His His Pro Glu Ser Gly Cys Arg Thr Val Leu Arg Leu His
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Arg Ala Leu His Trp Leu Gln Leu Phe Leu Glu Gly Leu Arg Thr Ser
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Pro Glu Asp Ala Arg Thr Ser Ala Leu Cys Ala Asp Ser Tyr Asn Ala
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                                           140
Ser Leu Ala Ala Tyr His Pro Trp Val Val Arg Arg Ala Val Thr Val
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Ala Phe Cys Thr Leu Pro Thr Arg Glu Val Phe Leu Glu Ala Met Asn
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               165
Val Gly Pro Pro Glu Gln Ala Val Gln Met Leu Gly Glu Ala Leu Pro
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                               185
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Phe Ile Gln Arg Val Tyr Asn Val Ser Gln Lys Leu Tyr Ala Glu His
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Ser Gly His Arg Trp Gly Ile Thr Leu Pro Thr Arg Asp Ser Arg His
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                                25
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Thr Ala Ser Thr Asn Cys Asp Ser Ser Ser Glu Gly Leu Glu Lys Asp
                            40
                                                45
        35
Thr Ala Thr Gln Arg Ser Asp Gln Thr Cys Leu Glu Pro Ser Cys Ser
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Cys Ser Ser Glu Asn Gln Glu Cys Gln Thr Ala Ala Ser Pro Gly Glu
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Ile Leu Glu Ile Leu Lys Lys Gly Lys Ala Phe Val Leu Asp Ile Asp
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Leu Asp Phe Phe Ser Val Lys Asn Pro Phe Lys Lys Met Phe Thr Gln
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            100
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Glu Glu Tyr Lys Ile Leu Gln Glu Leu Tyr Gln Phe Lys Lys Pro Gly
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                            120
                                                125
Thr Asn Leu Thr Glu Glu Asp Leu Val Asp Ile Val Asp Thr Arg Ile
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                        135
                                            140
His Gln Leu Glu Asp Leu Glu Ala Thr Phe Ala Asp Leu Cys Asp Gly
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Arg Asn Gly Ile Gln Thr Ile Gly Lys Tyr Gln Ser Ala Asn Ser Phe
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Pro Asp Asn Gln Val His Phe Glu Gly Tyr Gln Val Ser Asn Gln Cys

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Ser Leu Pro	Leu S	er Ala	His	Gly	Ile	Val	Val	Ala	Trp	Leu	Ser	Arg
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Ala Glu Trp	Asp G	ln Val		Val	Tyr	Leu	Phe		Asp	Asp	His	Lys
50		• • • • •	55	7	T1 -	mb	1101	60 T	2	C ~ ~	7	C 0 ==
Leu Gln Arg	Tyr A	1a Leu 70	ASI	Arg	TTE	Int	75	пр	Arg	261	Arg	80
Gly Asn Glu	Leu D		Δla	Val	Δla	Ser		Δla	Asp	Leu	Tle	
ory Asir Ora	8			•••		90					95	3
Cys Lys Leu			Thr	Gly	Gly		Gly	Thr	Asp	Glu	Leu	Arg
	100				105					110		
Leu Leu Tyr	Gly M	et Ala	Leu	Val	Arg	Phe	Val	Asn	Leu	Ile	Ser	Glu
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Arg Lys Thr	Lys P	he Ala		Val	Pro	Leu	Lys		Leu	Ala	Gln	Glu
130		_	135			•		140	G1		m>	***
Val Asn Ile	Pro A		He	Val	Asp	Leu	155	HIS	GIU	Leu	Inr	160
145 Lys Lys Met	Pro H	150 ic Ile	Δen	Asp	Cvs	Δra		Glv	Cvs	Tvr	Phe	
дув дув нес		65	AJII	nsp	-,0	170		027	0,0	-,-	175	
Leu Asp Trp			Thr	Tyr	Trp	Cys	Arg	Gln	Leu	Glu	Asn	Ser
	180	•			185	-	_			190		
Leu Arg Glu	Thr T	rp Glu	Leu	Glu	Glu	Phe	Arg	Glu	Gly	Ile	Glu	Glu
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Glu Asp Gln	Glu G	lu Asp		Asn	Ile	Val	Val		Asp	Ile	Thr	Glu
210	01 D	61-	215	3	~1	T ven	C ~ ~	220	Cl.	cor	Non.	Ua l
Gln Lys Pro 225	GIU P	230	Asp	Asp	GIY	гÀг	235	IIII	GIU	261	ASP	240
Lys Ala Asp	Glv A		Lvs	Glv	Ser	Glu		Val	Asp	Ser	His	
Lio Hia Hop		45	_,_			250					255	-1-
Lys Lys Ala			Lys	Glų	Leu	Tyr	Glu	Arg	Ala	Arg	Glu	Leu
	260				265					270		
Leu Val Ser	Tyr G	lu Glu	Glu	Gln	Phe	Thr	Val	Leu		Lys	Phe	Arg
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Tyr Leu Pro	Lys A	la Ile		Ala	Trp	Asn	Asn		Ser	Pro	Arg	Val
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Ala Val Leu	Asp A		Leu	Asp	Asp	Gly		Leu	Val	Pro	Thr	
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Glu Gln Leu	Ala A	la Leu	Gln	Ile	Glu	Tyr	Glu	Glu	Asn	Val	Asp	Leu
	340				345					350		
Asn Asp Val	Leu V	al Pro	Lys		Phe	Ser	Gln	Phe		Gln	Pro	Leu
355				360					365	_	~.	_
Leu Arg Gly	Leu H	ıs Ser		Asn	Phe	Thr	GIn		Leu	Leu	GLu	Arg
370 Met Leu Ser	Clust	ou Dro	375	Lan	Clar	Tle	Sar	380	Tle	Δνα	Pro	Thr
385	GIR P	390	AIG	red	GTÅ	TIE	395	GIY	116	ura	210	400
Tyr Ile Leu	Arg T		Va l	Glu	Leu	Ile		Ala	Asn	Thr	Lys	
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425

420

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465
                                 475
Glu Lys Leu Leu Arg Ile Cys Ser Ile Tyr Thr Gln Ser Gly Glu Asn
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                       490
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Ser Leu Val Gln Glu Gly Ser Glu Ala Ser Pro Ile Gly Lys Ser Pro
                                              510
                           505
          500
Tyr Thr Leu Asp Ser Leu Tyr Trp Ser Val Lys Pro Ala Ser Ser Ser
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Phe Gly Ser Glu Ala Lys Ala Gln Gln Glu Glu Glu Gln Ser Val
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Asn Asp Val Lys Glu Glu Glu Lys Glu Lys Glu Val Leu Pro Asp
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Gln Val Glu Glu Glu Glu Asn Asp Asp Gln Glu Glu Glu Glu Glu
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Asp Glu Asp Asp Glu Asp Glu Glu Glu Asp Arg Met Glu Val Gly
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Pro Phe Ser Thr Gly Gln Glu Ser Pro Thr Ala Glu Asn Ala Arg Leu
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Leu Ala Gln Lys Arg Gly Ala Leu Gln Gly Ser Ala Trp Gln Val Ser
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                                    620
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Gln Thr Glu Asp Pro Ala Glu Leu Met Leu Glu Asn Tyr Asp Thr Met
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Tyr Leu Leu Asp Gln Pro Val Leu Glu Gln Arg Leu Glu Pro Ser Thr
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Cys Lys Thr Asp Thr Leu Gly Leu Ser Cys Gly Val Gly Ser Gly Asn
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Glu Gly Phe Gln Gln Leu Val Ala Ser Tyr Cys Pro Glu Val Val Glu
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Asn Asn Phe Met Ile Asn Lys Glu Leu Gln Leu Glu Thr Lys Ala Asn
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Ser Arg Asn Ser Leu Thr Pro Ser Cys Pro Met Val Phe Met Ile Ala
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Cys Tyr Gln Asn Glu Ala Leu Cys Ser Thr Leu Tyr Ser Lys Ala Phe
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Gln Thr Gln Leu Leu Val Pro Lys Lys Val Leu Pro Glu Ser Cys Arg
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Leu Ser Trp Asn Leu Leu Gly Asp Glu Ala Ala Ala Glu Leu Ala Gln
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Gln Ile Thr Ala Leu Gly Ala Trp Leu Leu Ala Glu Gly Leu Ala Gln
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                                                  110
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Glu Trp Glu Cys Lys Thr Asp Ala Val Glu Ala Leu Thr Ala Leu Asn
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Val Pro Lys Thr Ser Leu Ser Ser Pro Pro Trp Pro Glu Val Val Leu
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Pro Asp Pro Val Glu Glu Thr Arg His His Ala Glu Val Val Lys
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Val Asn Glu Met Ile Val Thr Gly Gln Tyr Gly Arg Leu Phe Ala Val
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Val His Phe Ala Ser Arg Gln Trp Lys Val Thr Ser Glu Asp Leu Ile
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Leu Ile Gly Asn Glu Leu Asp Leu Ala Cys Gly Glu Arg Ile Arg Leu
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Glu Lys Val Leu Leu Val Gly Ala Asp Asn Phe Thr Leu Leu Gly Lys
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                           120
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Pro Leu Leu Gly Lys Asp Leu Val Arg Val Glu Ala Thr Val Ile Glu
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Lys Thr Glu Ser Trp Pro Arg Ile Ile Met Arg Phe Arg Lys Arg Lys
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Pro Lys Glu Arg Gly Glu Glu Ile Asp Thr Gly Gly Gly Lys Gln Glu
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Ser Cys Ala Pro Gly Ala Val Val Lys Ala Arg Pro Met Glu Gly Ser
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Leu Glu Glu Pro Gln Glu Thr Ser His Ser Gly Ser Asp Lys Glu His
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Arg Asp Val Glu Arg Ser Gln Glu Gln Glu Ser Glu Ala Gln Arg Tyr
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His Val Asp Asp Gly Arg Arg His Arg Ala His His Glu Pro Glu Arg
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Leu Ser Arg Arg Ser Glu Asp Glu Gln Arg Trp Gly Lys Gly Pro Gly
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Gln Asp Arg Gly Lys Lys Gly Ser Gln Asp Ser Gly Ala Pro Gly Glu
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Tyr Glu Ile Lys Met Ala Phe Val Leu Trp Leu Leu Ser Pro Tyr Thr
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Lys Gly Ala Ser Leu Leu Tyr Arg Lys Phe Val His Pro Ser Leu Ser
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Arg His Glu Lys Glu Ile Asp Ala Tyr Ile Val Gln Ala Lys Glu Arg
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Ser Asp Thr Glu 'Asp Glu Cys Trp Ser Asp Thr Glu Ala Val Pro Arg
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Val Cys Tyr Val Lys Phe Arg Asp Pro Ser Ser Val Gly Val Ala Gln
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Cys Ala Glu Gly Lys Ile Pro Glu Glu Ser Lys Ala Leu Ser Leu Leu
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Ala Pro Ala Pro Thr Met Thr Ser Leu Met Pro Gly Ala Gly Leu Leu
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Pro Ile Pro Thr Pro Asn Pro Leu Thr Thr Leu Gly Val Ser Leu Ser
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Ser Leu Gly Ala Ile Pro Ala Ala Leu Asp Pro Asn Ile Ala Thr
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Lys Ile Asp Glu Ile Arg Arg Thr Val Tyr Val Gly Asn Leu Asn Ser
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Pro Asp Glu Gly Gln Glu Glu Leu Glu Glu Val Gln Ala Glu Leu Lys
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Lys Lys Asp Glu Glu Val Ser His Gly Thr Val Asp Leu Asp Gln Lys
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660

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Ile Val His Arg Asp Leu Lys Leu Gly Asn Met Val Leu Asn Lys Arg
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Thr His Arg Ile Thr Ile Thr Asn Phe Cys Leu Gly Lys His Leu Val
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Ser Glu Gly Asp Leu Leu Lys Asp Gln Arg Gly Ser Pro Ala Tyr Ile
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225
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Ser Pro Asp Val Leu Ser Gly Arg Pro Tyr Arg Gly Lys Pro Ser Asp
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Met Trp Ala Leu Gly Val Val Leu Phe Thr Met Leu Tyr Gly Gln Phe
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Pro Phe Tyr Asp Ser Ile Pro Gln Glu Leu Phe Arg Lys Ile Lys Ala
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                            40
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Ser Ala Asp Leu Glu Ile Ile Asn Ala Thr Thr Gly Arg Arg Ser Cys
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Gly Gly Pro Ser Arg Leu Cys Lys His Val Leu Ser Ala Arg Trp Ala
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Arg Leu Tyr Gly Arg Leu Ser Thr Arg Thr Pro Ser Pro Gly Asp Thr
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Pro Ser Met Tyr Cys Glu Ala Lys Leu Gly Ala His Thr Tyr Gln Ser
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Val Lys Gln Gln Leu Phe Lys Ala Phe Gln Lys Ala Gly Leu Gly Thr
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Glu Glu Val Pro Asp Val Thr Pro Glu Glu Ala Leu Pro Glu Leu Pro
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Pro Gly Glu Pro Glu Phe Arg Cys Pro Glu Arg Val Met Asp Leu Gly
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Asp Val Gln Gln Leu Arg Gln Ala Ile Glu Glu Cys Lys Gln Val Ile
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Leu Glu Leu Pro Glu Gln Ser Glu Lys Gln Lys Asp Ala Val Val Arg
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Leu Ile His Leu Arg Leu Lys Leu Gln Glu Leu Lys Asp Pro Asn Glu
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Asp Glu Pro Asn Ile Arg Val Leu Leu Glu His Arg Phe Tyr Lys Glu
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Lys Ser Lys Ser Val Lys Gln Thr Cys Asp Lys Cys Asn Thr Ile Ile
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Trp Gly Leu Ile Gln Thr Trp Tyr Thr Cys Thr Gly Cys Tyr Tyr Arg
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Cys His Ser Lys Cys Leu Asn Leu Ile Ser Lys Pro Cys Val Ser Ser
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Lys Val Ser His Gln Ala Glu Tyr Glu Leu Asn Ile Cys Pro Glu Thr
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Gly Leu Asp Ser Gln Asp Tyr Arg Cys Ala Glu Cys Arg Ala Pro Ile
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Ser Leu Arg Gly Val Pro Ser Glu Ala Arg Gln Cys Asp Tyr Thr Gly
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Leu Pro Gly Pro Thr Leu Ala Phe Leu Val Leu Ser Thr Pro Ala Met
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Leu Thr Asp Pro Val Asp Gln Cys Val Ala Tyr His Leu Gly Arg Val
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Gly Glu Ser Leu Pro Glu Leu Gln Ile Glu Ile Ile Ala Asp Tyr Glu
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Gln Gly Leu Ala Val Tyr Ala Ser Pro Glu Asn Lys Lys Leu Phe Glu
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Glu Glu Lys Leu Leu Arg Gln Glu Gly Lys Leu Glu Lys Ile Gln Thr
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Lys Ala Gly Glu Ala Thr Val Lys Phe Leu Lys Ser Cys Arg Leu Glu
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Val Gly Met Lys Asn Asn Val Lys Trp Glu Leu Asn Pro Glu Ile Val
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Ala Arg His Phe Phe Lys Asn Leu Gly Val Val Val Ala Pro His Thr
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Glu Val Thr Val Asn Gly Leu Asp Thr Val Arg Val Pro Met Ser Val
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Ala Gln Arg Ala Ala Gln Glu Thr Glu Phe Pro Ser Gly Ala Ser Thr
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Ile Gln Thr Ile Thr Ser Ile Val Lys Lys Leu Ser Gln Asn Ile Glu
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Ile Leu Glu Asp Gln Ile Arg Ala Arg Asp Gln Ala Ala Thr Gly Thr
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tcaaaacata 1380	atttctgttt	catggagatg	aatacaaggc	tgcaagtgga	acatcctgtt
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aagattcctt 1500	tgagccagga	agaaataact	ctgcagggcc	atgeettega	agctagaata
tatgcagaag 1560	atcctagcaa	taacttcatg	cctgtggcag	gcccattagt	gcacctctct
actcctcgag 1620	cagacccttc	caccaggatt	gaaactggag	tacggcaagg	agacgaagtt

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tccgtgcatt atgaccccat gattgcgaag ctggtcgtgt gggcagcaga tcgccaggcg
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2160
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Ser Tyr Leu Ser Met Glu Lys Ile Ile Gln Val Ala Lys Thr Ser Ala
                            40
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Ala Gln Ala Ile His Pro Gly Cys Gly Phe Leu Ser Glu Asn Met Glu
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Phe Ala Glu Leu Cys Lys Gln Glu Gly Ile Ile Phe Ile Gly Pro Pro
                    70
                                        75
Pro Ser Ala Ile Arg Asp Met Gly Ile Lys Ser Thr Ser Lys Ser Ile
Met Ala Ala Gly Val Pro Val Val Glu Gly Tyr His Gly Glu Asp
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           100
                                105
Gln Ser Asp Gln Cys Leu Lys Glu His Ala Arg Arg Ile Gly Tyr Pro
                                                125
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                           120
Val Met Ile Lys Ala Val Arg Gly Gly Gly Gly Lys Gly Met Arg Ile
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   130
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Val Arg Ser Glu Gln Glu Phe Gln Glu Gln Leu Glu Ser Ala Arg Arg
145
                    150
Glu Ala Lys Lys Ser Phe Asn Asp Asp Ala Met Leu Ile Glu Lys Phe
                                                        175
                                    170
               165
Val Asp Thr Pro Arg His Val Glu Val Gln Val Phe Gly Asp His His
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                                                    190
Gly Asn Ala Val Tyr Leu Phe Glu Arg Asp Cys Ser Val Gln Arg Arg
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200

195

205

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His Gln Lys Ile Ile Glu Glu Ala Pro Ala Pro Gly Ile Lys Ser Glu
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                               220
Val Arg Lys Lys Leu Gly Glu Ala Ala Val Arg Ala Ala Lys Ala Val
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Asn Tyr Val Gly Ala Gly Thr Val Glu Phe Ile Met Asp Ser Lys His
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Asn Phe Cys Phe Met Glu Met Asn Thr Arg Leu Gln Val Glu His Pro
                            265
          260
Val Thr Glu Met Ile Thr Gly Thr Asp Leu Val Glu Trp Gln Leu Arg
                         280
                                           285
Ile Ala Ala Gly Glu Lys Ile Pro Leu Ser Gln Glu Glu Ile Thr Leu
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Gln Gly His Ala Phe Glu Ala Arg Ile Tyr Ala Glu Asp Pro Ser Asn
                 310
                          315
Asn Phe Met Pro Val Ala Gly Pro Leu Val His Leu Ser Thr Pro Arg
                     330
            325
Ala Asp Pro Ser Thr Arg Ile Glu Thr Gly Val Arg Gln Gly Asp Glu
          340
                     345
                                              350
Val Ser Val His Tyr Asp Pro Met Ile Ala Lys Leu Val Val Trp Ala
                                 365
                       360
Ala Asp Arg Gln Ala Ala Leu Thr Lys Leu Arg Tyr Ser Leu Arg Gln
                     375
                                       380
Tyr Asn Ile Val Gly Leu His Thr Asn Ile Asp Phe Leu Leu Asn Leu
                                    395
                 390
Ser Gly His Pro Glu Phe Glu Ala Gly Asn Val His Thr Asp Phe Ile
                                410
              405
Pro Gln His His Lys Gln Leu Leu Ser Arg Lys Ala Ala Ala Lys
                            425
         420
Glu Ser Leu Cys Gln Ala Ala Leu Gly Leu Ile Leu Lys Glu Lys Ala
                        440
                                 445
Met Thr Asp Thr Phe Thr Leu Gln Ala His Asp Gln Phe Ser Pro Phe
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Ser Ser Ser Ser Gly Arg Arg Leu Asn Ile Ser Tyr Thr Arg Asn Met
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Thr Leu Lys Asp Gly Lys Asn Ser Phe Arg Leu Leu Gly
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gggaggtaat taaaaaacag tggaatggaa aaacagtgct gtagtcatcc tgtaatatgc
tccttgtcaa caatgtatac attcctgcta ggtgccatat tcattgcttt aagctcaagt
300
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cgcatcttac tagtgaagta ttctgccaat gaagaaaaca agtatgatta tcttccaact
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gttataaaga aagatcatca aagtagaaat ttgaaatatg cttcctggaa ggaattctct
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gatttcatga agtggtccat tcctgccttt ctttatttcc tggataactt gattgtcttc
tatgtcctgt cctatcttca accagccatg gctgttatct tctcaaattt tagcattata
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Met Tyr Thr Phe Leu Leu Gly Ala Ile Phe Ile Ala Leu Ser Ser
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Arg Ile Leu Leu Val Lys Tyr Ser Ala Asn Glu Glu Asn Lys Tyr Asp
        35
                            40
Tyr Leu Pro Thr Thr Val Asn Val Cys Ser Glu Leu Val Lys Leu Val
Phe Cys Val Leu Val Ser Phe Cys Val Ile Lys Lys Asp His Gln Ser
                                        75
                    70
Arg Asn Leu Lys Tyr Ala Ser Trp Lys Glu Phe Ser Asp Phe Met Lys
                85
                                    90
                                                        95
Trp Ser Ile Pro Ala Phe Leu Tyr Phe Leu Asp Asn Leu Ile Val Phe
                                105
            100
Tyr Val Leu Ser Tyr Leu Gln Pro Ala Met Ala Val Ile Phe Ser Asn
                                                125
                            120
Phe Ser Ile Ile Thr Thr Ala Leu Leu Phe Arg Ile Val Leu Lys Arg
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gatcgccgag gcgggagtga agatagtcca agtcctaaga gacagcgcct ctctcattca
240
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gtotttgatt atacatcago atcaccagot cootcaccao caatgogaco atgggagatg
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tgcaacacac ctgcacgcaa cagaagaagt cctcctgtca ggcgccagag aggaagaagg
gatcgtctgt ctcgacataa ttccattagt caagatgaaa actatcacca tctcccttac
gcacagcage aagcaataga ggagcetega geetteeace eteegaatgt ateteeegt
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cagetecate aaggaacagt coetgtttet tacacagtaa caacagtgge accacatggg
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720
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gatecattte ttatacatee tecteacett tetececate atectectea tttgecacea
ccaggccagt ttgtcccttt ccaaacacag caatcacgat cgcctctgca aaggatagaa
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Asn Arg Arg Ser Pro Pro Val Arg Arg Gln Arg Gly Arg Arg Asp Arg
                            40
Leu Ser Arg His Asn Ser Ile Ser Gln Asp Glu Asn Tyr His His Leu
                       55
Pro Tyr Ala Gln Gln Gln Ala Ile Glu Glu Pro Arg Ala Phe His Pro
                                        75
                    70
65
Pro Asn Val Ser Pro Arg Leu Leu His Pro Ala Ala His Pro Pro Gln
                                    90
Gln Asn Ala Val Met Val Asp Ile His Asp Gln Leu His Gln Gly Thr
                                105
            100
Val Pro Val Ser Tyr Thr Val Thr Thr Val Ala Pro His Gly Ile Pro
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                            120
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Leu Cys Thr Gly Gln His Ile Pro Ala Cys Ser Thr Gln Gln Val Pro
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Gly Cys Ser Val Val Phe Ser Gly Gln His Leu Pro Val Cys Ser Val
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155
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Pro Pro Pro Met Leu Gln Ala Cys Ser Val Gln His Leu Pro Val Pro
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Tyr Ala Ala Phe Pro Pro Leu Ile Ser Ser Asp Pro Phe Leu Ile His
                                185
                                                    190
            180
Pro Pro His Leu Ser Pro His His Pro Pro His Leu Pro Pro Gly
                                                205
                            200
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Gln Phe Val Pro Phe Gln Thr Gln Gln Ser Arg Ser Pro Leu Gln Arg
                        215
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Ile Glu Asn Glu Val Glu Leu Leu Gly Glu His Leu Pro Gly Ala His
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Pro Gln His Pro His Leu Leu Ile Asn Ile Ser Thr
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eggeagaget acceaaacte gtacagtttg aaccgctatg atgtgtagag tecaaaggae
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aggaccagae tgttggtgae teetteeeeg geeeccacag cagtateaga aaettetgae
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20
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Thr Phe Thr Asp Cys Gln Lys Phe Leu Ile Leu Leu Trp Gly Pro Gly
Lys Glu Ser Pro Thr Val Trp Ser Cys Pro Leu Asp Ser Thr His His
                    70
                                        75
Ser Gly Ser Asn Cys Thr Ser Leu Gly Ser Ser Ala Gly Cys Ile Gly
Ser Gly Leu Phe Arg Cys Cys Cys Gly Arg Thr Asp Ser Pro Arg Ala
                                105
Gly Gly Arg Gly Gly Arg Trp Gly Ala Ser Pro Val Gly Ser Gly Asp
                            120
Thr Pro Glu Leu Leu Gly Arg Gln Cys His Pro Lys Asn His Gly His
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                                             140
Asp Gly Val Pro Asp His Ala Gly Gln Pro Ile Pro His His Gln Arg
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Ser Trp Ala
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cagaactgga actcgtcggg ctcggaggag gatccagaga cggagtctgg gccgcctgtg

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600

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tocagettge gtegacatgg etcaatggtg tecetggtgt etggageaag tggetaetet

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1920			cacaagaggg		
1980			ataccagcct		
2040			catgacagtg		
2100			tgtcaaacct		
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385
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Glu Val Glu Glu Asn Gly Ile Val Leu Asp Pro Leu Lys Ala Thr His
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                                             445
Ala Val Lys Gly Val Thr Gly His Glu Val Cys Asn Tyr Phe Trp Asn
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                                          460
Val Asp Val Arg Asn Asp Trp Glu Thr Thr Ile Glu Asn Phe His Val
                   470
                                      475
Val Glu Thr Leu Ala Asp Asn Ala Ile Ile Ile Tyr Gln Thr His Lys
                                 490
              485
Arg Val Trp Pro Ala Ser Gln Arg Asp Val Leu Tyr Leu Ser Val Ile
          500
                              505
                                                 510
Arg Lys Ile Pro Ala Leu Thr Glu Asn Asp Pro Glu Thr Trp Ile Val
                                             525
                          520
       515
Cys Asn Phe Ser Val Asp His Asp Ser Ala Pro Leu Asn Asn Arg Cys
                      535
                                          540
Val Arg Ala Lys Ile Asn Val Ala Met Ile Cys Gln Thr Leu Val Ser
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                   550
Pro Pro Glu Gly Asn Gln Glu Ile Ser Arg Asp Asn Ile Leu Cys Lys
                                  570
                                                     575
Ile Thr Tyr Val Ala Asn Val Asn Pro Gly Gly Trp Ala Pro Ala Ser
                                                  590
                             585
          580
Val Leu Arg Ala Val Ala Lys Arg Glu Tyr Pro Lys Phe Leu Lys Arg
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Phe Thr Ser Tyr Val Gln Glu Lys Thr Ala Gly Lys Pro Ile Leu Phe
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aaggttttat ataatgccaa taaaaatgat gattatgaca acgaggagat cttaacctat 180

gaggaaatgt cactttatca tcagccagca aataggaaga gacctatcat cttgattggt 240

ccacagaact gtggccagaa tgaattgcgt cagaggctca tgaacaaaga aaaggaccgc

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gagcatggtg aatttgagaa gaatttgtat ggaactagca tagattctgt acggcaagtg

atcaactctg gcaaaatatg tcttttaagt cttcgtacac agtcattgaa gactctccgg

540 aattcagatt tgaaaccata tattatette attgcaccce ettcacaaga aagacttegg

600 gcattattgg ccaaagaagg caagaatcca aagcctgaag agttgagaga aatcattgag

660 aagacaagag agatggagca gaacaatggc cactactttg atacggcaat tgtgaattcc

720 gatcttgata aagcctatca ggaattgctt aggttaatta acaaacttga tactgaacct

cagtgggtac catccacttg gctgaggtga aagaaacatc cattctgtgg catgttggac 840

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Lys Lys Asn Lys Lys Lys Arg Lys Lys Val Leu Tyr Asn Ala Asn Lys
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                           40
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Asn Asp Asp Tyr Asp Asn Glu Glu Ile Leu Thr Tyr Glu Glu Met Ser
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                                           60
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Leu Tyr His Gln Pro Ala Asn Arg Lys Arg Pro Ile Ile Leu Ile Gly
                   70
                                       75
Pro Gln Asn Cys Gly Gln Asn Glu Leu Arg Gln Arg Leu Met Asn Lys
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                                   90
Glu Lys Asp Arg Phe Ala Ser Ala Val Pro His Thr Thr Arg Ser Arg
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Pro Pro Ser Gln Glu Arg Leu Arg Ala Leu Leu Ala Lys Glu Gly Lys
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PCT/US00/08621 WO 00/58473

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PCT/US00/08621 WO 00/58473

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Jass Lys Pro Thr Gln Met 465 Gln Glu Leu	Phe Ser Thr Leu 450 Asn Lys Lys	Trp Ser Ile 435 Ser Pro Val Gln Ala 515	Asp Glu 420 Gln Ser Asp Pro Lys 500 Leu	Glu 405 Leu Cys Val Pro Leu 485 Gln	390 Phe Arg Asp Glu 470 Gly Leu Lys	Gly Tyr Leu Lys 455 Gln Thr Thr	Tyr Lys Cys 440 Asp Asp Phe Glu Thr 520	Leu Arg 425 Leu Tyr Arg Arg Lys 505 Pro	Ser 410 Arg Lys Pro Cys Lys 490 Ile	395 Ala Arg Trp Asp Glu 475 Asp Arg	Asn Ala Arg Thr 460 Ala Met Gln Ser	Trp Met Thr 445 Trp Ser Lys Gln Gln 525	Asn Glu 430 Leu Val Glu Thr Gln 510 Ala	Gln 415 Ile Pro Cys Gln Gln 495 Glu Asp	400 Pro Pro Phe Ser Lys 480 Glu Lys Leu
Jass Lys Pro Thr Gln Met 465 Gln Glu Leu Lys	Phe Ser Thr Leu 450 Asn Lys Glu Lys 530	Trp Ser Ile 435 Ser Pro Val Gln Ala 515 Leu	Asp Glu 420 Gln Ser Asp Pro Lys 500 Leu Pro	Glu 405 Leu Cys Val Pro Leu 485 Gln Gln Leu	390 Phe Arg Asp Glu 470 Gly Leu Lys Glu	Gly Tyr Leu Lys 455 Gln Thr Thr Val 535	Tyr Lys Cys 440 Asp Asp Phe Glu Thr 520 Thr	Leu Arg 425 Leu Tyr Arg Arg Lys 505 Pro	Ser 410 Arg Lys Pro Cys Lys 490 Ile Ile Arg	395 Ala Arg Trp Asp Glu 475 Asp Arg Pro	Asn Ala Arg Thr 460 Ala Met Gln Ser Ser 540	Trp Met Thr 445 Trp Ser Lys Gln Gln 525 Thr	Asn Glu 430 Leu Val Glu Thr Gln 510 Ala	Gln 415 Ile Pro Cys Gln Gln 495 Glu Asp	400 Pro Pro Phe Ser Lys 480 Glu Lys Leu
Jass Lys Pro Thr Gln Met 465 Gln Glu Leu Lys	Phe Ser Thr Leu 450 Asn Lys Glu Lys 530	Trp Ser Ile 435 Ser Pro Val Gln Ala 515 Leu	Asp Glu 420 Gln Ser Asp Pro Lys 500 Leu Pro	Glu 405 Leu Cys Val Pro Leu 485 Gln Gln Leu	390 Phe Arg Asp Glu 470 Gly Leu Lys Glu	Gly Tyr Leu Lys 455 Gln Thr Thr Val 535	Tyr Lys Cys 440 Asp Asp Phe Glu Thr 520 Thr	Leu Arg 425 Leu Tyr Arg Arg Lys 505 Pro	Ser 410 Arg Lys Pro Cys Lys 490 Ile Ile Arg	395 Ala Arg Trp Asp Glu 475 Asp Arg Pro	Asn Ala Arg Thr 460 Ala Met Gln Ser Ser 540	Trp Met Thr 445 Trp Ser Lys Gln Gln 525 Thr	Asn Glu 430 Leu Val Glu Thr Gln 510 Ala	Gln 415 Ile Pro Cys Gln Gln 495 Glu Asp	400 Pro Pro Phe Ser Lys 480 Glu Lys Leu
Jass Lys Pro Thr Gln Met 465 Gln Glu Leu Lys Val 545	Phe Ser Thr Leu 450 Asn Lys Glu Lys 530 Arg	Trp Ser Ile 435 Ser Pro Val Gln Ala 515 Leu Arg	Asp Glu 420 Gln Ser Asp Pro Lys 500 Leu Pro	Glu 405 Leu Cys Val Pro Leu 485 Gln Gln Leu	390 Phe Arg Glu Glu 470 Gly Leu Lys Glu Arg 550	Gly Tyr Leu Lys 455 Gln Thr Thr Val 535 Pro	Tyr Lys Cys 440 Asp Asp Phe Glu Thr 520 Thr	Leu Arg 425 Leu Tyr Arg Arg Lys 505 Pro Thr	Ser 410 Arg Lys Pro Cys Lys 490 Ile Ile Arg	395 Ala Arg Trp Asp Glu 475 Asp Arg Pro	Asn Ala Arg Thr 460 Ala Met Gln Ser 540 Leu	Trp Met Thr 445 Trp Ser Lys Gln 525 Thr	Asn Glu 430 Leu Val Glu Thr Gln 510 Ala Glu	Gln 415 Ile Pro Cys Gln 495 Glu Asp Glu Val	400 Pro Pro Phe Ser Lys 480 Glu Lys Leu Pro Ile 560
Jass Lys Pro Thr Gln Met 465 Gln Glu Leu Lys Val 545	Phe Ser Thr Leu 450 Asn Lys Glu Lys 530 Arg	Trp Ser Ile 435 Ser Pro Val Gln Ala 515 Leu Arg	Asp Glu 420 Gln Ser Asp Pro Lys 500 Leu Pro	Glu 405 Leu Cys Val Pro Leu 485 Gln Gln Leu	390 Phe Arg Glu Glu 470 Gly Leu Lys Glu Arg 550	Gly Tyr Leu Lys 455 Gln Thr Thr Val 535 Pro	Tyr Lys Cys 440 Asp Asp Phe Glu Thr 520 Thr	Leu Arg 425 Leu Tyr Arg Arg Lys 505 Pro	Ser 410 Arg Lys Pro Cys Lys 490 Ile Arg Pro Leu	395 Ala Arg Trp Asp Glu 475 Asp Arg Pro	Asn Ala Arg Thr 460 Ala Met Gln Ser 540 Leu	Trp Met Thr 445 Trp Ser Lys Gln 525 Thr	Asn Glu 430 Leu Val Glu Thr Gln 510 Ala Glu	Gln 415 Ile Pro Cys Gln 495 Glu Asp Glu Val	400 Pro Pro Phe Ser Lys 480 Glu Lys Leu Pro Ile 560
Jass Lys Pro Thr Gln Met 465 Gln Glu Leu Lys Val 545 Arg	Phe Ser Thr Leu 450 Asn Lys Glu Lys 530 Arg	Trp Ser Ile 435 Ser Pro Val Gln Ala 515 Leu Arg Ala	Asp Glu 420 Gln Ser Asp Pro Lys 500 Leu Pro	Glu 405 Leu Cys Val Pro Leu 485 Gln Gln Leu Gln	390 Phe Arg Glu 470 Gly Leu Lys Glu Arg 550 Arg	Gly Tyr Leu Lys 455 Gln Thr Thr Val 535 Pro	Tyr Lys Cys 440 Asp Phe Glu Thr 520 Thr Arg	Leu Arg 425 Leu Tyr Arg Arg Lys 505 Pro Thr Ser	Ser 410 Arg Lys Pro Cys Lys 490 Ile Ile Arg Pro Leu 570	395 Ala Arg Trp Asp Glu 475 Asp Arg Pro 555 Pro	Asn Ala Arg Thr 460 Ala Met Gln Ser 540 Leu	Trp Met Thr 445 Trp Ser Lys Gln Gln 525 Thr Pro	Asn Glu 430 Leu Val Glu Thr Gln 510 Ala Glu Ala	Gln 415 Ile Pro Cys Gln Gln 495 Glu Asp Glu Val Pro 575	400 Pro Pro Phe Ser Lys 480 Glu Lys Leu Pro Ile 560 Ala
Jass Lys Pro Thr Gln Met 465 Gln Glu Leu Lys Val 545 Arg	Phe Ser Thr Leu 450 Asn Lys Glu Lys 530 Arg	Trp Ser Ile 435 Ser Pro Val Gln Ala 515 Leu Arg Ala	Asp Glu 420 Gln Ser Asp Pro Lys 500 Leu Pro Pro Arg	Glu 405 Leu Cys Val Pro Leu 485 Gln Gln Leu Gln	390 Phe Arg Glu 470 Gly Leu Lys Glu Arg 550 Arg	Gly Tyr Leu Lys 455 Gln Thr Thr Val 535 Pro	Tyr Lys Cys 440 Asp Phe Glu Thr 520 Thr Arg	Leu Arg 425 Leu Tyr Arg Arg Lys 505 Pro Thr Ser Ser Ile	Ser 410 Arg Lys Pro Cys Lys 490 Ile Ile Arg Pro Leu 570	395 Ala Arg Trp Asp Glu 475 Asp Arg Pro 555 Pro	Asn Ala Arg Thr 460 Ala Met Gln Ser 540 Leu	Trp Met Thr 445 Trp Ser Lys Gln Gln 525 Thr Pro	Asn Glu 430 Leu Val Glu Thr Gln 510 Ala Glu Ala Arg Lys	Gln 415 Ile Pro Cys Gln Gln 495 Glu Asp Glu Val Pro 575	400 Pro Pro Phe Ser Lys 480 Glu Lys Leu Pro Ile 560 Ala
Jass Lys Pro Thr Gln Met 465 Gln Glu Leu Lys Val 545 Arg Ser	Phe Ser Thr Leu 450 Asn Lys Glu Lys 530 Arg Asn	Trp Ser Ile 435 Ser Pro Val Gln Ala 515 Leu Arg Ala Pro	Asp Glu 420 Gln Ser Asp Pro Lys 500 Leu Pro Pro Arg 580	Glu 405 Leu Cys Val Pro Leu 485 Gln Gln Leu Gln Ser 565 Lys	390 Phe Arg Asp Glu 470 Gly Leu Lys Glu Arg 550 Arg	Gly Tyr Leu Lys 455 Gln Thr Thr Pro	Tyr Lys Cys 440 Asp Asp Phe Glu Thr 520 Thr Arg Pro Val	Leu Arg 425 Leu Tyr Arg Arg Lys 505 Pro Thr Ser	Ser 410 Arg Lys Pro Cys Lys 490 Ile Ile Arg Pro Leu 570 Ser	395 Ala Arg Trp Asp Glu 475 Asp Arg Pro 555 Pro	Asn Ala Arg Thr 460 Ala Met Gln Ser 540 Leu Thr	Trp Met Thr 445 Trp Ser Lys Gln 525 Thr Pro Pro	Asn Glu 430 Leu Val Glu Thr Gln 510 Ala Glu Ala Arg Lys 590	Gln 415 Ile Pro Cys Gln Gln 495 Glu Asp Glu Val Pro 575 Leu	400 Pro Pro Phe Ser Lys 480 Glu Lys Leu Pro Ile 560 Ala Pro

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130
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Gln Val Met Leu Leu Glu His Thr Pro Pro Gly Ser Ala Ile Leu Ser
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                   150
145
Val Ser Ala Thr Asp Arg Asp Ser Gly Ala Asn Gly His Ile Ser Tyr
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                                    170
His Leu Ala Ser Pro Ala Asp Gly Phe Ser Val Asp Pro Asn Asn Gly
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Thr Leu Phe Thr Ile Val Gly Thr Leu Ala Leu Gly His Asp Gly Ser
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Gly Ala Val Asp Val Val Leu Glu Ala Arg Asp His Gly Ala Pro Val
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                                            220
Arg Ala Ala Arg Ala Thr Val Asn Val Gln Leu Arg Asp Gln Asn Asp
                   230
                                        235
His Ala Pro Ser Phe Thr Leu Phe His Tyr Arg Val Ala Val Thr Glu
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                                   250
Asp Leu Pro Pro Gly Ser Thr Leu Leu Thr Leu Glu Ala Thr Asp Ala
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gccggagga aaaagcggtc ctacaccaag gactacaccg agggatgggt ggagttccgt
gacaagegea tagecaageg egtggeggee agtetacaca acaegeetat gggtgeeege
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                           40
Arg Val Val Pro Gly Ile Val Tyr Leu Gly His Ile Pro Pro Arg Phe
                                          60
                       55
Arg Pro Leu His Val Arg Asn Leu Leu Ser Ala Tyr Gly Glu Val Gly
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                                       75
Arq Val Phe Phe Gln Ala Glu Asp Arg Phe Val Arg Arg Lys Lys
                                  90
               85
Ala Ala Ala Ala Gly Gly Lys Lys Arg Ser Tyr Thr Lys Asp Tyr
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                              105
                                                  110
Thr Glu Gly Trp Val Glu Phe Arg Asp Lys Arg Ile Ala Lys Arg Val
                                              125
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                           120
Ala Ala Ser Leu His Asn Thr Pro Met Gly Ala Arg Arg Arg Ser Pro
                                          140
                       135
Phe Arg Tyr Asp Leu Trp Asn Leu Lys Tyr Leu His Arg Phe Thr Trp
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                                      155
Ser His Leu Ser Glu His Leu Ala Phe Glu Arg Gln Val Arg Arg Gln
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                                                      175
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Arg Leu Arg Ala Glu Val Ala Gln Ala Lys Arg Glu Thr Asp Phe Tyr
                                                  190
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Leu Gln Ser Val Glu Arg Gly Gln Arg Phe Leu Ala Ala Asp Gly Asp
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                                              205
Pro Ala Arg Pro Asp Gly Ser Trp Thr Phe Ala Gln Arg Pro Thr Glu
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220
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Gln Glu Leu Arg Ala Arg Lys Ala Ala Arg Pro Gly Gly Arg Glu Arg
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aaatgctcac ttcttaacct cttttgtcct ggagcataga attactgcaa atgctcaccc
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Asn Ala His Phe Leu Thr Ser Phe Val Leu Glu His Arg Ile Thr Ala
       35
                           40
Asn Ala His Pro Trp Glu Leu Ser Cys Pro Arg Ser Pro Thr Gln Thr
Leu Gln His Glu Arg Ala Arg Leu Asn Leu Lys Lys Lys Phe Arg
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                                25
                                                    30
Gln Pro Pro Ala Ser Ala Thr Thr Pro Val Pro Leu Ala Arg Phe Phe
                            40
                                                45
       35
Val Asn Phe Pro Ser Ala Lys Gln Tyr Phe Ser Gln Phe Lys His Met
                        55
                                            60
Glu Asp Pro Leu Glu Met Glu Arg Ser Pro Gln Leu Arg Lys His Ala
Cys Arg Val Met Gly Ala Leu Asn Thr Val Val Glu Asn Leu His Asp
                                    90
               85
Pro Asp Lys Val Ser Ser Val Leu Ala Leu Val Gly Lys Ala His Ala
                                105
                                                    110
           100
Leu Lys His Lys Val Glu Pro Val Tyr Phe Lys Ile Leu Ser Gly Val
                           120
                                                125
       115
Ile Leu Glu Val Val Ala Glu Glu Phe Ala Ser Asp Phe Pro Pro Glu
                                            140
                       135
Thr Gln Arg Ala Trp Ala Lys Leu Arg Gly Leu Ile Tyr Ser His Val
                                       155
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1380

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Leu Arg Val Val Leu Ala Leu Arg Gly Arg Glu Glu Val Ser Asp Ala
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                            40
                                                45
Gly Cys Gly Gly Pro Arg Ile Thr Ile Asn Lys Asp Thr Lys Val Pro
                                            60
   50
                        55
Asn Ala Cys Leu Phe Thr Ile Asn Lys Glu Asp His Thr Leu Gly Asn
                                        75
                    70
Ile Ile Lys Ser Gln Leu Leu Lys Asp Pro Gln Val Leu Phe Ala Gly
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Tyr Lys Val Pro His Pro Leu Glu His Lys Ile Ile Ile Arg Val Gln
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                                                    110
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